Amended Summons issued original

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

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ALAN B. AMRON Pro Se

Plaintiff,

-against-

LONNIE G. JOHNSON and BRUCE M. D'ANDRADE

Defendants.

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CIVIL ACTION NO.

CV-96-6376

JURY TRIAL DEMANDED

AMENDED COMPLAINT
JURISDICTION AND VENUE

1. This is an action brought for the purpose of determining an actual controversy under the patent laws of the United States, Title 35 U.S.C. and for unfair competition arising under the Trademark Act of 1946, 15 U.S.C. section 1051 et , as amended (hereinafter "the Lanham Act") and for violations of "repeated and persistent fraud", "false advertising" and deceptive acts and practices in violation of New York general business and common law, Tortious interference with contractual arrangements. Venue in this district is proper under 28 U.S.C. Section 1391 and 1400 (b).

2. The jurisdiction for this case is diversity of citizenship, pursuant to T-28, U.S.C Section 1332.

PARTIES

3. Plaintiff, Alan B. Amron (hereinafter referred to as **"Amron"**), is an individual residing at 77 Horton Place, Syosset New York 11791.

4. Defendant, Lonnie G. Johnson (hereinafter referred to as **"Johnson"**), is an individual residing at 4030 Ridgehurst Drive Smyrna, Ga. 30080.

5. Defendant, Bruce M. D'Andrade (hereinafter referred to as **"D'Andrade"**), is an individual residing at 3 Ten Eyck Road Whitehouse Station, New Jersey 08822.

6. "Amron" has developed, designed and patented a wide variety of children's toys, and games, for licensing such toys to the toy industry. Among other inentions which Amron had been assigned and which he had developed are a number of battery and air pressurized continuous stream water guns. (see Exhibit #1)

7. Defendants, "Johnson" and "D'Andrade", falsely represented to the United States Patent and Trademark office on February 28, 1992 in a patent application (see Exhibit #2),

> that was five months after "Amron" had already notified the Patent and Trademark office on September 27, 1991 in patent application serial number 07/767,244 (see Exhibit #3), and on October 7, 1991 in document disclosure #292923 (see Exhibit #3A) and again on October 28, 1991 in document disclosure #294586 (see Exhibit #3B) of that very same invention that "Johnson" and "D'Andrade" had falsely claimed to have conceived of first. See a comparison chart in Exhibit #3C comparing Amron's invention to Johnson's.

that they were first to have conceived of this Communicating Vessel Principle to pressurize air pressure water guns.

8. Defendants, "Johnson" and "D'Andrade", have intentionally conspired with the now Larami/Hasbro, the

assignee of this patent number 5,150,819, who was at one time a partner in the development of this hydraulic Communicating Vessel Principle to pressurize water guns system with "Amron". See Exhibit #4.

9. Upon information and belief, the defendants, "Johnson" and "D'Andrade", sold their patent for this new hydraulic two bottle water gun and called it the "Super Soaker", among other styles and variations of the same thing, to Hasbro toys Inc. for a reported 150 million dollars.

10. Upon information and belief, the defendants, "Johnson" and "D'Andrade" have a contractual relationship with Hasbro toys Inc. as employee and/or consultant, to help facilitate the development of the "Super Soaker" water guns now owned by Hasbro.

BACKGROUND

11. In 1973 "Amron" invented, and patented, (U.S. Patent No. 4,022,350) the very first battery operated water gun toy, which thereafter changed the pricing structure in the entire water gun industry. See Exhibit #5.

12. That as a result of the commercial success of Amron's battery operated water guns in 1986 and the development and licensing of other air pressurized water guns in 1990, the Defendants, "Johnson" and "D'Andrade" began to embark upon a course of conduct to fulfill a desperate need for them to develop bigger and better water guns than "Amron".

13. That on at least one occasion the defendant, "D'Andrade" patented a battery operated water gun that worked on 3 volts as opposed to 6 volts thereby getting a patent for a more energy efficient battery operated water gun. Not new novel or unique but he received a patent.

14. Upon information and belief, on or about 1989 inventor Lonnie Johnson offered his 1988 patented pulsating air pressurized water gun to Larami/Hasbro and Defendant "D'Andrade got involved in it's development. They paid "Johnson" $5,000.00 and signed an agreement which provided that they would pay him a royalty if the product could be sold.

15. Defendants, "Johnson" and "D'Andrade", with total disregard for the truth, first displayed the "Johnson" patent number on the packaging and products sold worldwide even thought the Johnson patent did not protect, and was not representative of, the actual product that was being sold. See Exhibit #7.

16. The aforesaid was done in a string of false and misleading statements and misuses of patents and trademarks to give the defendants, "Johnson" and "D'Andrade" an unfair business marketing edge over potential competitors. See Exhibit #8 and #8A.

17. Defendants, Johnson and D'Andrade thereafter filed for a patent which would cover the actual product it was selling,

however, in their second continuing effort to mislead the public and the toy trade it was announced to everyone, in an ad run in the China Morning Post newspaper during the toy trade's most important trade show, that the Defendants had been granted broad patent protection for the Super Soaker water guns because of it's huge commercial success. See Exhibit #9.

18. That when months later a patent was finally issued, and everyone could review it for themselves, the actual claims granted to the Defendants "D'Andrade" and "Johnson" were narrow ones, not the broad ones originally claimed to gain an unfair business advantage over their competition.

19. In 1988 "Amron" had licensed to Blue Box toys a line of continuous stream battery operated water guns which were called "The Drenchers" and "Rad Soakers".

20. Amron filed for the necessary applications for patents and trademarks in Washington D.C. The Trademark office approved for publication "The Drenchers" and "Rad Soaker". one full year prior to Larami filing for the "Super Soaker" trademark now in opposition #88,180 before the Trademark Trial and Appeal Board.

21. That after learning that the defendants, "Johnson" and "D'Andrade" had named their continuous stream water gun "The Power Drencher", Amron notified their assignee of a previous trademark filed, and already licensed to Blue Box toys for

the trademark "The Drenchers" and "Rad Soaker".

22. That thereafter the defendants, Johnson and D'Andrade's assignee agreed to change the name of their water gun and in fact changed it to "Super Soaker". See Exhibit #10. Amron objected, because the Drencher line also consisted of the trademarked item called "Rad Soaker" also a continuous stream water shooting gun. Amron advised that the defendants Johnson and D'Andrade's assignee should use another name since the trademark on Soaker was already licensed to Blue Box toys. They refused, and months later the "Super Soaker" was introduced into the market place.

23. That Amron invented four new advanced air pressurized continuous stream water guns, which was about to enter into a license agreement with Playtime toys.

24. When the defendants assignee Larami learned about the new license, they stated they would be interested in a license for those new water guns. Amron sought and received from Larami their assurance that they were not just trying to stall Amron and they would promise to manufacture at least one of the four new water guns.

25. That the defendants assignee Larami promised they would pay an advance of $20,000.00 and would promise to make at least one of the four water guns. Thereafter Larami did in fact pay Amron an advance against future royalties of $20,000.00 dollars, however Larami never manufactured any of

those four water guns and they never did return the four prototypes to Amron. See Exhibit #11.

26. That as a result of the aforesaid conduct the defendants assignee Larami were able to successfully restrain the trade, by preventing Amron from licensing the air pressure water guns to another manufacturer, competitors of Larami. Amron was intentionally and maliciously kept out of the market, with these new products, in order for the Defendants, "Johnson" and "D'Andrade" and their assignee Larami to gain an unfair business advantage over their competition.

> On December 24, 1996 patent number 5,586,688 was issued to the defendant "Johnson" for one of the four air pressurized battery operated water guns that the plaintiff "Amron" had previously licensed to their assignee Larami Corporation. On or about June 27, 1994 the defendant "Johnson" testified in a trial between Amron and his assignee and was privy to the issues at that trial which included the four gun license agreement with Larami. Just four months after that trial date of June 27, 1994 in November of that same year the defendant "Johnson" blatantly filed for a patent on that very same invention Amron disclosed at the trial.

27. That in a third attempt to mislead the public, and gain an unfair business advantage over their competition, the Defendants assignee Larami had used in store point of sale banners 6 feet long displaying in major retail stores all over the United States, listing an "R" in a circle, thereby falsely representing to the world that Larami had in fact been issued a registration on the trademark name "Super Soaker". See Exhibits #13, #13A & #13B.

28. This was not a true statement then, and still not now. Larami has no registration on the name "Super Soaker". The statement on the banner was False.

29. That in their fourth continuing effort to intentionally mislead the general public, and the people in the toy trade, and to gain and maintain an unfair business advantage over their competition, and even after receiving a warning letter from an attorney (See Exhibit #13A) notifying them to stop making these False Statements of Trademark Registration, the Defendants assignee Larami did announce to the trade, through a national toy publication in October of 1993,

> "Larami corporation, manufacturer of the Super Soaker water toy, has announced that the United States Trademark Office recently granted Larami a trademark registration." (see Exhibit #13B)

30. That the aforesaid announcement was made with total disregard for the truth and was meant to, and did in fact, mislead people into believing that the Super Soaker trademark had been registered, when in fact, it has not.

31. In their fifth continuing effort to make false statements on Trademark Registration of the name "Super Soaker", to gain an unfair business advantage over their competition, the defendants, assignee Larami ran an ad in Playthings magazine whereby they blatantly made false claims of Trademark Registration on the name "Super Soaker" in an intimidating posed stare type advertisement. see Exhibit #14

> "The Super Soaker Name and the product design are registered trademarks, ... "

32. That as a result of the aforesaid the products licensed by Amron suffered competitively in the toy market and royalties were severely restricted and or stopped completely.

33. That in their sixth continuing effort, with the blatant disregard for patent and trademark rules and regulations, the defendants assignee Larami had again made false and misleading statements of Trademark Registration on the name "Super Soaker" in a full page ad run by one of their key chain licensees Basic Fun Inc. (See Exhibit #15) in the June 1996 toy industry magazine, the Toy Book, this was after three previous warnings to stop making false claims of trademark registration.

34. That in their seventh continuing effort of the defendants assignee Larami to make false statements of Trademark Registration on the "Super Soaker" name, even after a letter (see Exhibit #15A) warning of this false statement in the June 96 issue of The Toy Book magazine, Larami/Hasbro's exclusive licensed maker of the "Super Soaker" key chain, ran another full page ad in the August 1996 issue of The Toy Book making the same false statement of trademark registration on the name "Super Soaker". (See Exhibit #15B)

35. On at least two occasions the Defendants attorneys had sent out damaging warning letters to Amron's licensees, or potential licensees, (see Exhibit #24 and #24A) thereby tortiously interfering with potential current and future contractual relationships.

36. In an opinion dated January 16, 1997, the United States Patent and Trademark office accepted evidence I recently discovered (on 12/3/96) which "raise(s) a substantial new question of patentability" of the Super Soaker water gun patent. Since discovering the new evidence, it has come to my attention that, upon information and belief, Larami, the inventor and their attorneys knew all along about this pertinent prior art and willfully and intentionally kept it from the courts and the Patent and Trademark office in order to gain an unfair business advantage over their competition in the form of a United States design Patent #D-318,309. I submit this information for consideration in the overall determination of whether Larami on behalf of D'Andrade and Johnson committed multiple frauds in connection with the Super Soaker water gun. (see Exhibit #16)

37. Because D'Andrades design patent is invalid based on the new evidence, any claims that he had established a common law trademark on that image design look due to it's huge successes over the years must be dismissed. As further detailed below the newly discovered evidence existed long before D"Andrade filed for his Patent or trademark rights. D'Andrade would never have had the chance to achieve the huge successes necessary to acquire a claim of common law trademark, had that evidence come to light at the time of his first filings.

38. In order to acquire a common-law trademark on a

particular image or design, the person seeking the trademark must cultivate the image or design in the minds of the buying public. Such cultivation takes time. In this case, during the time that D'Andrade was cultivating his common-law trademark, it was, under false pretenses, preventing his competition from doing the same. Larami advertised on his products (see Exhibit #17) on his packaging (see Exhibit #18) in trade publications (see Exhibits #19) and in published press announcements (see Exhibit #20) claiming to own a trademark and patent on the Super Soaker image and design, thus inhibiting his competitors from manufacturing and marketing a similar water gun design. Accordingly, because (i) Larami was the only toy manufacturer to manufacture, market and sell the Super Soaker design, and (ii) D'Andrade falsely claimed an exclusive right to the image and design in his application for Patent No. D-318,309, which was issued in July of 1991 (see Exhibit #21) D'Andrade & Larami realized huge revenues on the Super Soaker, thus enabling it to claim a common-law trademark on its look and design. Had Lanard Toys, Remco Toys, Toy Max, Water Works and Arco/Mattel Toys and other toy manufacturers been allowed to place similarly-designed water guns on the market during the same time period, 1989-1991, Larami and D'Andrade would never have realized such revenues and would therefore never have been able to claim a common-law trademark.

Larami, the inventors, and their legal counsels'
FRAUD ON THE COURT "SUBORN PERJURY"
Failure to report

39. Upon information and belief, Larami, D'Andrade and Johnson along with their attorneys had full knowledge of this prior art well before the Amron trial in June of 1994 in Philadelphia. In or about 1990/91, five or six toy companies larger than Larami where about to introduce a similar image water gun. However, a water gun design with a water tank on the top was what D'Andrade, Johnson and Larami claimed as its own, and claimed to have a patent and trademark on, and used as its criterion to legally notify anyone of infringement (see Exhibit #19) showing the intimidating advertisement run by Larami warning all infringers to beware,

"You'll Get Soaked" ... "Don't try it." ...
... "we've got you covered."

while making false claims of having patents and trademarks on the design and name). In particular, one shocking settlement made by Larami on behalf of D'Andrade and Johnson, is evidence of Larami's knowledge of the prior art.

40. Upon information and belief, Larami on behalf of D'Andrade and Johnson had sent a cease and desist letter to Remco toys, notifying them of Larami's intent to sue them for image infringement if they did not stop manufacturing their "One Pump" air pressurized water guns (there were four different sizes in Remco's line) with water tanks on top similar to the design which Larami falsely claimed as its own exclusive, patented and trademarked design.

41. Upon information and belief, not wanting any legal trouble with Larami, D'Andrade and Johnson, and because of the large outlay of costs to manufacture its line, Marvin Azrak, President of Remco, met with Alvin Davis and his attorneys to discuss an amicable settlement.

42. Upon information and belief, as the days went by, Larami on behalf of D'Andrade and Johnson demanded more and more to keep Remco from manufacturing its "One Pump" water guns in a large sum of money up front and either a continued large royalty or a complete halt to the manufacturing and selling of all four of Remco's already manufactured "One Pump" water guns. During this time, Azrak found a picture in a toy collectors published book (see Exhibit #22) that he believed was the same image as Larami was claiming as its exclusive image. Azrak then rushed this book over by messenger to Remco's lawyer, Jesse Rothstein, Esq., a very well respected and successful patent attorney in New York City. It was the opinion of Remco's counsel then, and it is confirmed by the Patent and Trademark office now, that it was in fact the same image as Larami was claiming in their United States design patent number D-318,309.

43. Upon Information and belief, Marvin Azrak called Alvin Davis at Larami to set up a meeting during toy fair 1991 to discuss settlement. During the meeting Marvin Azrak showed the picture of this new found prior art to Alvin Davis and his attorney. Although they did not necessarily agree that

it would invalidate Larami and D'Andrade's newly acquired, or soon to be acquired, design patent, Davis and his attorney did agree that they did not want to take that chance, and so a small sum of money and Larami's agreement not to stop Remco toys from making the "One Pump air pressurized water guns" made for a quick settlement. It seems odd that, from that meeting on, Remco toys was the only one of Larami's competitors allowed to make air pressurized water guns with a water tank on the top. (see Exhibit #23)

44. Part of this was told to me directly from Marvin Azrak the day after it happened, while I was in his office during that same toy fair. Azrak was boasting how he "got those F--s" and how at first Larami on behalf of D'Andrade and Johnson was being unreasonable about settlement until he showed them this picture of an old, what looked like to be a Super Soaker water gun, then they immediately became friends and settled all their disputes. I did not understand, at that time, exactly what all that meant, other than Azrak did it, and from that point on, Larami had no objection to Remco's making and selling guns with the water tank on top. Larami would not bother Remco any more.

45. Upon information and belief, Alvin Davis from Larami and Marvin Azrak from Remco understood and agreed that if this prior art ever got out it would ruin both their market shares, because then anyone could make and sell a water gun with the water tank on top of the gun.

46. Upon information and belief, it was not the legal responsibility of Marvin Azrak and or his lawyers, simply by knowing about this prior art in 1990/91, to notify anyone of it's existence.

47. Upon information and belief however, Alvin Davis, Myung Song along with the inventors Bruce D'Andrade, Lonnie Johnson and the attorney's knowledge of this prior art and their refusal to report it to the Patent and Trademark Office, constitutes both Fraud and Inexcusable behavior. They all had an obligation to notify the Patent and Trademark office to evaluate it. They intentionally failed to do so. To make things even worse, it was extremely unfair business practice for Larami, the inventor Bruce D'Andrade and their attorneys to withhold this prior art, while making false statements and continuing to pursue litigation against all other claimed infringers on that image, other than Remco, of course.

THEREFORE based on the above newfound information and beliefs of Fraud and Deceit on the part of Larami, the inventor Bruce D'Andrade, Lonnie Johnson and it's principles and their attorneys, it is now clear that Larami has for the past five years illegally, and under false pretenses, claimed not only this common law trademark, but an invalid design Patent (Number D-318,309) to prevent all others from making similarly designed water guns.

"To gain an unfair business advantage over their competition."

The Patent and Trademark office has agreed with me that the newfound evidence (discovered on 12/3/96) raises "a substantial new question of patentability" of the Super Soaker image and design claim: (see Exhibit #16)

> "A substantial new question of patentability affecting the claim of United States Patent Number D-318,309 to Bruce D'Andrade is raised by request."
>
> "It is agreed that consideration of exhibits 1-3 of the supplemental Affidavit of 12/3/1996 raise a substantial new question of patentability as to the claim of D'Andrade."

WHEREBY, Larami and the Inventors Bruce D'Andrade and Lonnie Johnson have allegedly committed the following violations;

* Fraud on the court, failure to report, suborn perjury, "repeated and persistent fraud", "false advertising" and deceptive acts and practices.";
* A substantial new question of the patentability on the Super Soaker patent #D-318,309 by the Patent office;
* Multiple, and continuous, false and misleading statements;
* Unfair business tactics, and unclean hands, to gain an unfair business advantage over their competition and to illegally control the toy water gun market;
* False patent mismarkings;
* Multiple, and continuous, false statements of trademark registration on the exact mark "Super Soaker";
* Misuses of patents for that same "Super Soaker" product;
* Interference with contractual arrangements, and or relationships;
* Restraint of trade.

COUNT I -- DECLARATORY JUDGEMENT

48. Plaintiff incorporates the averment of paragraphs 1 through 47 as if fully restated herein.

49. Defendants, "Johnson" and "D'Andrade" have falsely filed for patent numbers 5,150,819 & 5,322,191 & 5,586,688 & D-318,309, falsely claiming better dates of first inception then that of the Plaintiff "Amron", and not reporting better prior art when found.

50. The defendants United States Patent Numbers 5,150,819, 5,322,191 & 5,586,688 and D-318,309 should all be declared invalid due to the Plaintiff's earlier conception dates and or better prior art.

COUNT II -- DECLARATION OF INVALIDITY OF PATENT NUMBERS 5,150,819, 5,322,191, 5,586,688 AND D-318,309.

51. Plaintiff incorporates the averment of paragraphs 1 through 50 as if fully restated herein.

52. Defendants have represented that they invented and or discovered the technology in patent numbers 5,150,819, 5,322,191 & 5,586,688 & D-318,309 and have the right to licence and collect royalty for them.

53. The defendants conspired to file a false patent applications thereby causing Amron great financial injury.

COUNT III -- VIOLATION OF SECTION 43 (a) OF THE LANHAM ACT

54. Plaintiff incorporates the averment of paragraphs 1 through 53 as if fully restated herein.

55. Defendants D'Andrade and Johnson's misrepresentations have influenced the purchasing decisions of Amron's licensees, potential licensees and other parties in the toy industry and have caused Amron irreparable harm in the form of lost revenue, as well as damage to Amron's reputation.

56. Amron has suffered irrevocable financial injury due to the false patent filings of the defendants, "Johnson" and "D'Andrade", and knowingly making false and misleading misrepresentations that were published to Amron's customers, potential customers and other parties in the toy industry who were actually deceived or who were likely to be deceived by Defendants D'Andrade and Johnson's misrepresentations are acts of unfair competition under the common law of the State of New York.

COUNT IV -- DEFAMATION

57. Plaintiff incorporates the averment of paragraphs 1 through 56 as if fully restated herein.

58. The misrepresentations and other actions of the Defendants, Johnson and D'Andrade were made for the purpose of obtaining a competitive advantage and constitute defamatory statements intended to harm Amron's reputation, to lower Amron in the estimation of the business community and to deter third persons from associating or dealing with

Amron.

59. The recipients of the Defendants defamatory statements understood the intent by the Defendants that the statements referred to Amron's licensees, and further understood the defamatory meaning of the false and misleading statements. As a result of the false and defamatory statements by the Defendants, Amron and his licensees have suffered substantial economic injury and damage to their reputation in the toy industry.

COUNT V -- UNFAIR COMPETITION

60. Plaintiff incorporates the averment of paragraphs 1 through 59 as if fully restated herein.

61. The false and misleading statements and actions of Defendants D'Andrade and Johnson were acts of unfair competition under the common law of the State of New York.

62. As a result of the acts of unfair competition of D'Andrade and Johnson, Amron has suffered substantial economic injury and damage to his reputation.

COUNT VI -- INTERFERENCE WITH EXISTING AND PROSPECTIVE BUSINESS RELATIONS

63. Plaintiff incorporates the averment of paragraphs 1 through 62 as if fully restated herein.

64. The false and misleading statements of Defendants D'Andrade and Johnson were published to licensees and

customers and potential licensees and customers of Amron.

65. D'Andrade and Johnson published the false and misleading statements with the purpose or intent to harm Amron and his licensees by disrupting the relations or preventing the potential relations from occurring.

66. Amron and his licensees have suffered substantial economic injury and damage to their reputations by reason of D'Andrade and Johnson's actions.

COUNT VII -- PUNITIVE DAMAGES

67. Plaintiff incorporates the averment of paragraphs 1 through 66 as if fully restated herein.

68. The intentionally damaging and conspired actions and conduct of the Defendants, "Johnson" and "D'Andrade" and their assignees was willful, deliberate and malicious, with a bad motive for reckless indifference to Amron and without any justification.

PRAYERS FOR RELIEF

WHEREFORE, Plaintiff demands judgement against the defendants, "Johnson" and "D'Andrade":

A. That the defendants, Johnson and D'Andrade and their agents, servants and employees, and all persons acting in concert with them be restrained and enjoined during the pendency of this lawsuit and permanently thereafter from:

(1) representing that D'Andrade has a valid U.S. Patent number D-318,309 for the shape of the Super Soaker water gun.

(2) representing that The Super Soaker name has a registered trademark.

(3) representing that the Super Soaker water gun has the exclusive right to a water bottle on top of the gun.

(4) making any false or misleading statements or announcements regarding the intellectual property rights of the "Super Soaker."

B. That D'Andrade and Johnson be required to send a notice to all parties who read, or could have read, the false and misleading statements and;

(1) the claimed United States Patent for design of the Super Soaker water guns in United States Patent D-318,309 be declared void, and all revenues earned from it paid to Amron directly.

(2) that their patent numbers 5,150,819 & 5,322,191 & 5,586,688 be declared invalid and all royalties they had received from the sales of those patent rights be paid to Amron directly.

(3) D'Andrade and Johnson apologize for any harm or inconvenience caused to Amron as a result of their multiple false and misleading publications.

C. That judgement be entered for compensatory damages in favor of the Plaintiff and against the defendants, both

jointly and severally, for no less than **TEN MILLION DOLLARS.**

D. That a judgement be entered for punitive damages in favor of the plaintiff and against the defendants, both jointly and severally, for no less than **FIVE MILLION DOLLARS.**

E. That judgement be entered in favor of the plaintiff and against the defendants, both jointly and severally, for treble damages in a sum of no less than **FORTY FIVE MILLION DOLLARS.**

F. That judgement be entered in favor of the plaintiff and against the defendants, both jointly and severally, for out of pocket expenses and costs relating to this case in the sum of **FIFTY THOUSAND DOLLARS.**

G. That the court order such other and further relief as may be deemed by the Court to be just and proper under the circumstances.

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Defendants,

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and

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Exhibit list to support the attached amended complaint

1. List of Amron's water related hits, for Amron background.

2. D'Andrade patent #5,150,819, validity in question.

3. Proof of my patent filing date of September 27, 1991 serial number 07/767,244, for a communicating vessel principle system to pressurize air pressure water guns.

3a. Proof of October 7, 1991 date of first conception date document disclosure #292923, of this new system.

3b. Proof of October 31, 1991 date of first conception date document disclosure #294586, of this new system.

3c. Comparison chart Amron's invention v Johnson et al.

4. Proof of assignment from Hasbro to Alan Amron July 13, 1992, of this new system.

5. Alan Amron patent # 4,022,350, for Amron background.

6. Johnson patent number 5,322,191, validity in question.

7. Proof of misuse and mismarking of the Johnson patent # 4,591,071.

8. U.S.D.C E.D. of P.A. Case #91-7923 dated 1/24/92 from Judge Weiners order paragraph #15 were Larami agreed to stop mismarking the Johnson patent, for background.

8a. A summary timeline chart of mismarkings and misuse of patents and trademarks by Larami/Hasbro on behalf of Johnson et al., for background.

9. Misstatements in the China Morning News of patent issue, for background.

10. Larami agreed to stop the misuse of the drencher trademark in a letter from their counsel, for background.

11. Letter from Larami's counsel admitting they could not locate Amron's four guns inventions prototypes to return to Amron, to prove they held those items back.

11a. A letter requesting those four prototypes describing the exact one falsely filed for by Johnson, a battery operated air pump water gun.

12. The Johnson patent #5,586,688 for that very same

battery operated air pressurized water gun as was previously licensed to Larami by Amron, and requested back to Amron in Exhibit 11a.

13. A 6 foot banner falsely claiming trademark registration on the name Super Soaker, for background.

13a. A letter from a lawyer requesting Larami stop making these false statements, for background.

13b. In spite of the two previous warnings they again announced to the toy trade that they had received trademark registration on the name Super Soaker, for background.

14. Larami ran this intimidating ad falsely claiming to have been issued trademark registration on the Super Soaker name strictly to gain an unfair business advantage over their competition.

15. The most recent of false claims of trademark registration on behalf of the Super Soaker name, for background.

15a. Another warning letter, for background.

15b. Another false claim of trademark registration on the Super Soaker name, for background.

16. Patent and Trademark office decision dated 1/16/97.

17. Imprint on product with soon to be invalidated D'Andrade design patent number D-318,309.

18. Listed on package soon to be invalidated D'Andrade design patent number D-318,309.

19. False advertising in trade publication.

20. False press announcement for shape of water gun design.

21. D'Andrade's soon to be invalidated design patent number D-318,309.

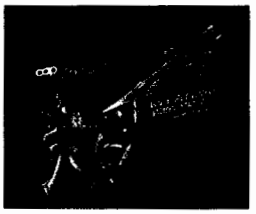
22. Picture found by Marvin Azrak.

23. Proof That Remco's water tanks are on top of their guns and the other competitors, Lanard and Arco/Mattel's are not.

24. Warning letters sent from the Defendants attorneys to Amron's potential, and or current, licensees.

List of Amron's water related hits!

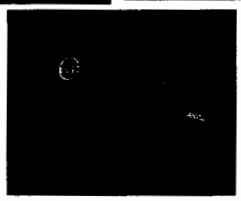
1995 thru 1996
Shout N' Shoot & Shout N' Shoot II The first ever Voice Activated battery operated water shooters by: CAP TOY




1994 thru 1996
The Python Snake, The first ever Remote control battery operated water shooter on a remote control car by: TYCO TOYS

1993 thru 1996
Air pressurized, no batteries required, water guns "One Pump" & "Double Pump" by: REMCO TOYS & ARCO/MATTEL TOYS


1992 thru 1996
"Robo Blaster" The first ever battery operated wrist water shooter by: CAP TOY



1991 thru 1994
"Bubbles N' Burst" The first ever battery operated bubbles maker & water gun combination by: PLAYTIME/TYCO TOYS

1990 thru 1996
The "Rad Soaker", "Drencher" line of the first ever continuous stream battery operated water guns by: BLUE BOX TOYS


1984 thru 1994
The first ever Pulsating battery operated water guns by:

Larami Toys | Empire of Carolina Toys | Buddy L Toys | LJN/Entertech Toys | Playtime/Tyco Toys





US005150819A

United States Patent [19]

Johnson et al.

[11] Patent Number: 5,150,819

[45] Date of Patent: Sep. 29, 1992

[54] **DOUBLE TANK PINCH TRIGGER PUMP WATER GUN**

[76] Inventors: **Lonnie G. Johnson**, 2923 N. Casitas Ave., Altadena, Calif. 91001; **Bruce M. D'Andrade**, 3 Ten Eyck Rd., Whitehouse Station, N.J. 08889

[21] Appl. No.: **841,762**

[22] Filed: **Feb. 28, 1992**

Related U.S. Application Data

[63] Continuation of Ser. No. 680,247, Apr. 3, 1991, abandoned, which is a continuation-in-part of Ser. No. 578,145, Sep. 6, 1990, Pat. No. 5,074,437.

[51] **Int. Cl.**[5] **A63H 33/18**

[52] **U.S. Cl.** **222/79**; 222/400.8; 222/401; 42/54; 273/349; 446/473

[58] **Field of Search** 222/79, 130, 325, 396, 222/400.7, 400.8, 401; 42/54; 446/473; 273/349; 124/70, 73; 239/99

[56] **References Cited**

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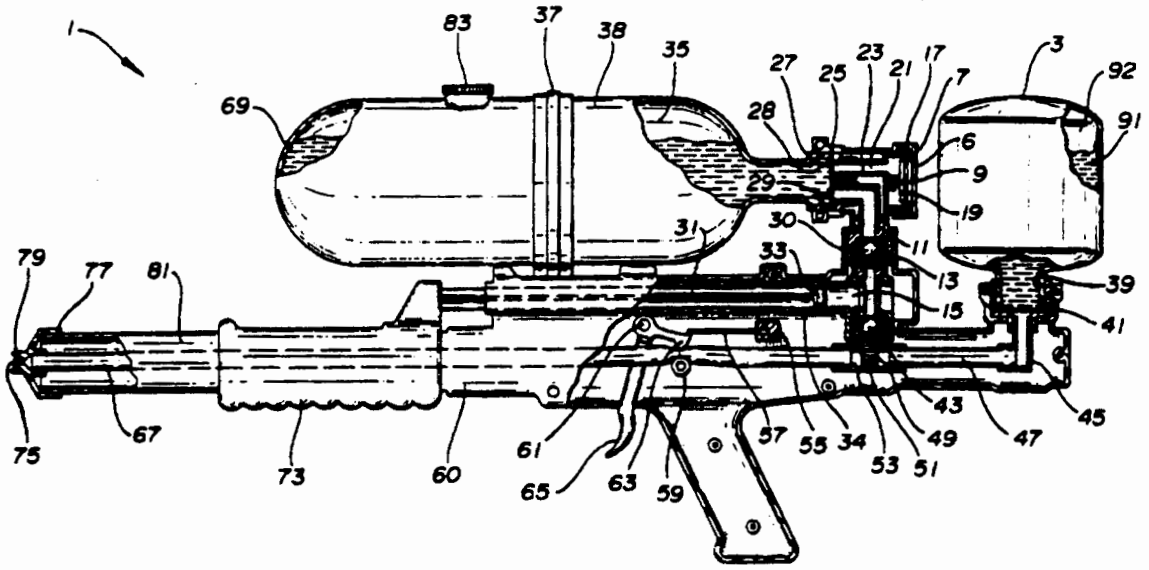
Primary Examiner—Gregory L. Huson
Attorney, Agent, or Firm—Kenneth P. Glynn

[57] **ABSTRACT**

The present invention is directed toward a toy water gun which is operated by selectively releasing water from a water reservoir pressurized with air. The present invention has a manually operated pump incorporated into the design. As the pump is cycled, water and air is drawn from a water storage tank. Once drawn, the water and air are forced into a pressure reservoir. As the amount of water and air forced into the pressure reservoir increases, the pressure on the water within the pressure reservoir increases. The pressure of the water and air within the pressure reservoir increases with each cycle of the pump, until the pump can no longer overcome the pressure of the water and air within the pressure tank. The pressurized water and air within the pressure tank has an avenue of release that is regulated by the trigger mechanism of the invention. When no force is applied to the trigger, the pressurized water and air are held at bay with no means of release. When force is applied to the trigger, the water is first released from the pressurized container and is channeled through a narrow nozzle. The escape of the water, under pressure, through the narrow nozzle creates a stream of propelled water that lasts as long as the trigger is engaged or until the air pressure propelling the water equals the ambient pressure.

19 Claims, 2 Drawing Sheets



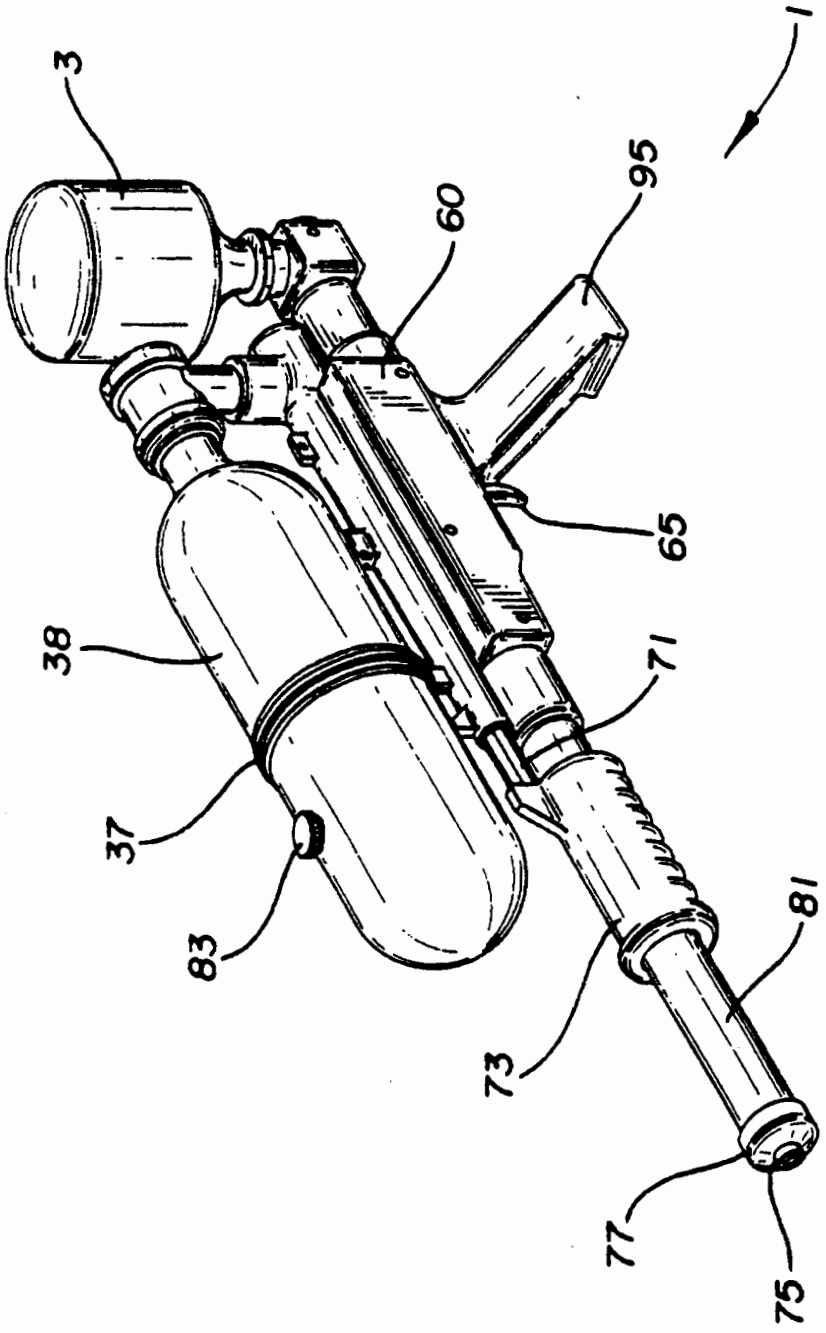
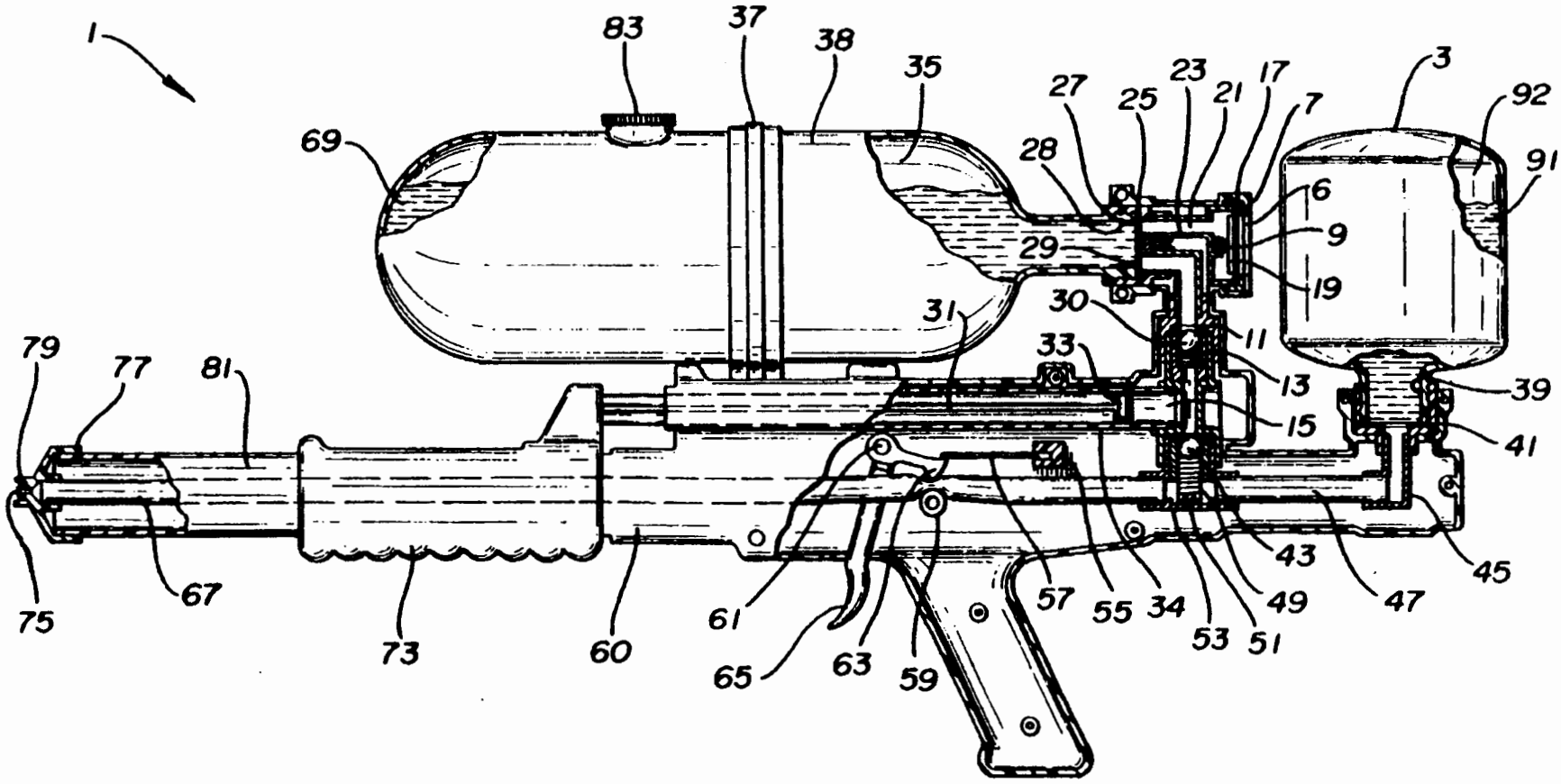


FIG-1

FIG-2



DOUBLE TANK PINCH TRIGGER PUMP WATER GUN

REFERENCE TO RELATED CASE

This application is a continuation of U.S. Ser. No. 07/680,247 filed Apr. 3, 1991 now abandoned, which is a continuation-in-part of copending U.S. patent application Ser. No. 07/578 145, filed on Sept. 06, 1990 now U.S. Pat. No. 5,074,437 by Bruce M. D'Andrade and Lonnie Johnson, inventors. entitled "Pinch Trigger Pump Water Gun".

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention is directed toward a toy water squirt gun, and more particularly to such toy water squirt guns that use a self-contained pumping means to draw water from a storage reservoir, compress an air cushion with the drawn water, and store the water pressurized by the compressed air in a second pressurized reservoir. The water is then released in a selective manner through a narrow nozzle, causing the stored water to be propelled forward in a narrow stream.

2. Prior Art Statement

Water guns have for decades been a very popular child's toy. Since the toy industry is very competitive, hundreds of different style water guns have been developed in an attempt to profit from the toy's inherent popularity. The most traditional forms of water guns are activated by a pumping action, either manually through the trigger or automatically through a battery operated motor. Such pump action water guns work, but the guns are limited in the distance the water traveled, the amount of water projected and the duration of the pumping cycle. In an attempt to improve upon water guns, the toy industry has developed pressure activated water guns. Such pressure water guns work upon the principle of pressure differentials between the water held within the toy and the atmosphere. The water within the toy is held at a pressure higher than that of the ambient air. As a result, when the water within the toy is given an avenue of escape, the water will stream out under the pressure. Prior art that shows pressure differential types of water guns are exemplified by the following:

U.S. Pat. No. 3,197,070 to Curtis F. Pearl et al, shows a water gun activated by trapping water in a collapsible area. As the device is collapsed, the pressure of the water builds, spraying the water out of the one small orifice left within the pressured volume. Once the confined volume is fully collapsed, the reexpansion of the volume draws forth more water from a reservoir, thus priming the water gun for another cycle. The water being pressurized is limited to the volume of the collapsible volume. The Pearl invention cannot store pressurized water for use at a later time, nor can the pressure of the water be increased by cycling the pumping action of the invention while restraining water discharge.

U.S. Pat. No. 4,854,480 to Robert S. Shindo and U.S. Pat. No. 4,735,239 to Michael E. Salmon et al, both show toy water devices that use an elastic bladder to pressurize water. The bladders are filled with high pressure water, and the bladders respond by elastically deforming. The source of pressurized water is then removed and the water within the expanded bladder is held in place by a clamping device activated by a trigger. The water gun is used by selectively releasing the water from the expanded bladder.

Water guns have also been developed that use air pressure to pressurize water and force water through squirt channels. Such toys that use air pumps to pressurize water are exemplified by the following:

U.S. Pat. No. 4,214,674 to Jones et al, shows a two-piece apparatus consisting of a pressurized water reservoir and a discharging gun. Air is introduced into the water reservoir via a hand operated pump. The air pressurizes the water, forcing it up through the discharging gun, where the rate of discharge can be regulated by a trigger.

Thus, although prior art does show toy water guns that have collapsible water chambers and self-contained pumping means, prior art neither teaches nor suggests a toy water gun that uses a self-contained water pumping device to draw both water and air from a storage reservoir, pressurize air with the water drawn, and store the pressurized air and water in a second pressurized reservoir, where it can accumulate until discharged. Additionally, the safety of the invention is assured by a triggering device that automatically and safely discharges pressurized water when over pressurized, until the maximum allowable pressure is reached.

SUMMARY OF THE INVENTION

The present invention is directed toward a toy water gun which is operated by selectively releasing water from a pressurized water reservoir. The present invention has a manually operated pump incorporated into the design. As the pump is cycled, water and air is drawn from a water storage tank. Once drawn, the water and air are forced into a second pressure reservoir. As the amount of water and air forced into the pressure reservoir increases, the pressure of the air displaced by the water within the pressure reservoir increases. The pressure of the air and water within the pressure reservoir increases with each cycle of the pump, until the pump can no longer overcome the pressure of the air and water within the pressure tank. The pressurized air and water within the pressure tank has an avenue of release that is regulated by the trigger mechanism of the invention which has a safety pressure release within its design. When no force is applied to the trigger, the pressurized water and air are held at bay with no means of release. When force is applied to the trigger, the heavier water is first released from the bottom of the pressurized container and is channeled through a narrow nozzle. The escape of the pressurized water through the narrow nozzle creates a stream of propelled water that lasts as long as the trigger is engaged or until the pressure within the pressurized container equals the ambient air pressure.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood by referring to the following detailed specifications, the above specification and the claims set forth herein, when taken in connection with the drawings appended hereto, wherein:

FIG. 1 shows a perspective view of one preferred embodiment to the present invention; and

FIG. 2 shows a partially fragmented side view of the embodiment depicted in FIG. 1, illustrating the claimed inner mechanisms.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

The present invention is, as mentioned, directed toward a toy water gun that uses a manually operated pump to draw and pressurize water and air, storing the water and air under pressure until selectively discharged. The science of pressurized water toys is not new, and over the years many different designs have been developed utilizing a pumping action to pressurize water. As applied to the art of toy water squirt guns, the most common type of device involves a two-stroke pump, wherein the pump draws water into a chamber through a large orifice during the priming stroke, and forces water out of the chamber through a very narrow orifice during the compression stroke. This simple system forms the basis of thousands of devices in addition to water guns, such as non-aerosol dispensing devices for hair spray, perfume, window cleaner, and countless other products that are dispensed in a narrow stream or mist.

The problem with simple two-stroke squirting systems is that the amount of fluid that can be expelled is limited to the volume of the compressible area; also, the pressure of the liquid exiting the device is dependent directly upon the force being applied during the time of expulsion. Consequently, when water is squirted in this manner, only a small volume is released with each pumping action. When attempts are made to increase the amount of water propelled by increasing the volume of the compressible area, the pumping action cannot displace the water at a high pressure, resulting in expulsion of water at low pressures.

Water guns need the characteristics of squirting a large volume of water at high pressures. The higher the pressure, the longer the distance the water can be propelled, thus increasing the range and power of the water gun. The present invention water gun uses a common two-stroke pump to store and pressurize large amounts of water. The present invention draws predetermined volumes of water and air from a storage container, pressurizes air with the drawn water and deposits the pressurized air and water in a second storage tank, where it remains under pressure. As more and more water and air are drawn, pressurized and deposited within the second storage container, the volume and the pressure of the stored water increases, compressing the air within the second container. The water propelled by the compressed air can then be selectively released through a narrow orifice, creating a stream of propelled water. The double tank system of the present invention allows the user of the invention to determine the volume and pressure of the water to be discharged, and also allows a user to refill and replace the non-pressurized water storage tank without disabling the water gun's ability to discharge water. The double tank system gives water guns a variety of firing characteristics that is unique in the art of toy water guns, allowing an operator to choose and adjust the range and power of the water gun.

The present invention also has other advantages over other pressurized container water guns, in that, instead of pumping only air into a chamber that already contains water, the present invention pumps water into a chamber which is filled with air. The pumping of water is more efficient than the pumping of air, thus less pumping strokes are required and higher pressures are easier to achieve.

When designing toys involving pressurized air and water, the problem becomes one of safety. Toys are designed to be inexpensive so as to be widely marketable. As such, most toys are made of plastics or other inexpensive materials. Such materials do not have large tensile strengths or fatigue characteristics, and therefore do not lend themselves well to containing pressurized fluids. Plastic containments of pressurized liquids, if not properly designed, can rupture and explode, causing injury. The present invention has a unique design that allows for both the use of high pressure air and the elimination of potential rupturing hazards. The present invention has a cylindrical pressurized reservoir with a single opening. The single orifice, in conjunction with the generous radii used at the cylinder ends, serve to maintain the integrity of the water reservoir walls and minimize the stress points throughout the material of the pressurized reservoir, thereby allowing for the safe use of pressures generated by the present invention.

Referring now to FIGS. **1** and **2**, one preferred embodiment of the present invention **1** is shown. FIG. **1** shows a perspective view of the present invention **1** and FIG. **2** shows a fragmented side view of the present invention, exposing the internal mechanisms with like parts being like numbered. As shown from FIGS. **1** and **2**, the embodiment shown of the present invention has two tanks, a water storage tank **38** and a pressurized tank **3**. Both tanks **38**, **3** attach to a main housing **60** that is shaped generally in the form of a gun having a handle **95**, trigger **65** and barrel **81**. The water storage tank **38** is held firmly to the housing **60** with a hoop **37**. The hoop **37** minimizes the stresses on the tapered neck of the storage tank **38** as the water **69** within shifts during movement.

Referring now solely to FIG. **2**, the inner workings of the present invention **1** can best be visualized and explained. Water **69** is placed within water storage tank **38**. The water **69** is introduced in one of two ways. First, the water **69** can be poured through the optional filling cap **83**, or the water storage tank **38** can be removed from the housing **60** and water can be poured through the neck opening of the storage tank **38**. The water storage tank **38** is shown in FIG. **2** as being bottle shaped, with a neck terminating in a threaded head **28**. The storage tank **38**, in the shown embodiment, screws into the housing **60**. However, it should be understood that the storage tank **38** can be formed unistructurally with the housing **60**, and if so formed, the optional filling cap **83** would become a necessary part of the design. It should also be understood that the storage tank **38** can be formed in any shape or size, as long as the design holds and stores water.

Water **63** and air **35** are drawn from the storage tank **38** through an orifice **29** that connects with the storage tank **38**. The invention will draw either water **63** or air **35** from the storage tank **38**, depending on the orientation of the invention when the operator draws materials from the storage tank **38**. As water **69** or air **35** are taken from the storage tank **38**, a partial vacuum is produced within. The vacuum is eliminated by a vent valve **19** that allows air **35** to enter into the storage container **38** as the vacuum develops. The vent valve **19** is biased by a spring **9** in the closed position, preventing water from escaping, and an optional elastomeric washer **7** helps seat the vent valve **19**, enhancing its ability to prevent the escape of water. It should be understood that although a vent valve **19** is the best mode of the invention, the invention may function without such a valve so long

as the storage container has an open vent to the ambient air. Similarly, an elastomeric seal 25 can be used to help seat the water storage tank 38 against the housing 60, the elastomeric seal having an orifice therethrough, allowing for the passage of the draw tube 29 and the vacuum venting passage 21.

The force drawing the water 69 or air 35 from the storage tank 38 is created by the movement of the piston 33 within its cylinder 34. The movement of the piston 33 within the cylinder 34 has two-cycle strokes, a priming stroke where water 69 or air 35 are drawn forth from the water storage reservoir 38, and a compression stroke wherein water 69 or air 35 are displaced by the piston 33. The priming stroke starts when the piston 33 is retreated within its cylinder 34, creating a large volume chamber 15. The vacuum created by the expanding chamber 15, draws water 69 or air 35 through the draw tube 29 and into the chamber 15. The flow of water 69 or air 35 into the expanding chamber 15 opens a one-way valve that is normally biased in a closed position. The one-way valve that is shown in FIG. 2 consists of a ball 30 that is biased against an elastomeric seal 11 by a spring 13. As a vacuum is created by the piston 33, the force of the spring 13 is overcome and the ball 30 drops away from the elastomeric seal 11, allowing water 69 or air 35 to pass. As the piston 33 is advanced within its cylinder 34, the compression stroke begins and water 69 or air 35 now within the chamber is compressed, closing the one-way valve by assisting the spring 13 to push the ball 30 against its seal 11. Although a ball and seal one-way valve is illustrated, it should be understood that any design of a one-way valve would work within the present invention as long as the valve made a seal that is both air and water tight.

The compression stroke created by the advancement of the piston 33 within the cylinder 34 causes the water 69 or air within the chamber 15 to become pressurized. The water 69 or air 35, as a result of the diminishing volume of the chamber 15, opens a second one-way valve that leads to the pressurized storage tank 3. As the piston 33 is reciprocated within its cylinder 34, water 69 or air 35 is repeatedly drawn from the storage tank 38 and deposited into the pressurized storage tank 3. As more and more water 69 or air 35 is drawn and forced into the pressurized storage tank 3, the pressure with tank 3 increases until the force used to drive the piston 33 can no longer overcome the stored pressures, or until the pressure is released through the safety trigger 65.

The movement of the piston 33 within cylinder 34 draws water 69 or air 35 from storage tank 38 through an orifice 29. However, when the storage tank 34 is positioned so that the air 35 within the storage tank 38 is in contact with the orifice 29, the movement of the piston 33 will draw air 35 into the pumping chamber 15. When the pumping chamber 15 is compressed, the air 35 will become pressurized and flow into the pressurized storage tank 3, forming an air cushion, while not increasing the pressure of any water 91 present within the pressurized storage tank 3. By having a pumping action that can introduce both air 92 and water 91 into the pressurized storage tank 3, the pressure of the air 35 can be increased above that available by an air pumping system alone because of the inefficiency of a normal hand pump. The pumping of water 91 is more efficient than that of air 92 because of the incompressibility of liquids, therefore the work available from the pumping system is maximized when used to pump water against an air cushion.

The operation of the pumping action is achieved by the piston 33 being driven by a piston rod 31 that is affixed to a handle 73. The handle 73, as shown in this embodiment, is slidably attached to the barrel 81. As the handle 73 is manually reciprocated along the barrel 81, the motion is transferred to the piston 33, creating the desired pumping effect. Although a linear pumping action is shown, it should be understood that a variety of orientations and multiple linkage configurations could be manipulated by a user to create the desired pumping motion.

Once the desired pressure is obtained within the pressurized tank 3, the water 91 stressed by the compressed air 92, is discharged by selectively opening an exit orifice to the surrounding ambient air. The pressure differential between the ambient air and the water 91 causes the water 91 to stream out. In the shown embodiment of the present invention, the pathway connecting the pressurized tank 3 to the ambient air is a pair of tubes, a flexible exit tube 67 and a pump connection tube 47. As water or air leaves the pumping chamber 15, it passes by a one-way valve 43 and into a T-shaped connection 53. The T-shaped connection 53 on one side attaches to the flexible exit tube 67, and on the other side attaches to connection tube 47. As water or air is forced into the T-shaped connection 53, the water or air tries to enter both the exit tube 67 and the connection tube 47. However, the exit tube 67 is closed by the trigger pinch bar 63, leaving the connection tube 47 as the only pathway through which the water may pass. The connection tube 47 leads to the pressure tank 3, consequently all or air water expelled by the pump is led into the pressure tank 3. When pressurized water 91, stored within the pressure tank 3 is to be discharged, the trigger 65 is depressed. The trigger 65 is formed with a pinch bar 63 that is biased against the exit tube 67 by a spring 57. As the trigger 65 is depressed, the bias of the spring 57 is overcome and the pinch bar 63 is lifted away from the exit tube 67. With the exit tube 67 open, the integrity of the pressure tank 3 is now breached and the pressurized water 91 is offered an avenue of escape to the ambient air. The pressure differential between the pressurized water 91 and the ambient air causes the water 91 to flow back out through the connection tube 47, through the T-shaped connection 53 and through the exit tube 67, until the water 91 is discharged through the exit orifice 75 formed at the end of the exit tube 67.

The amount of pressurized water 91 being discharged through exit orifice 75 is controlled by the user in a variety of ways. A user can control the amount of water discharged by controlling the depression of the trigger 65. If the trigger 65 is depressed and left in that position, the pressurized water 91 will be discharged until the pressure tank 3 is empty, or until the pressure of the compressed air 92 equals that of the ambient air. The user may choose to discharge the pressurized water 91 selectively, depressing the trigger 65 for short periods of time, resulting in numerous shots being allowed before the pressure tank 3 needs to be refilled. A user may also choose to vary the pressure and amount of water being discharged by selectively adding the air 92 within pressure tank 3. The more water 91 or air 92 is added, the higher the pressure and the farther and longer the invention may propel water.

As mentioned, the present invention water gun is operated by selectively releasing the pressurized water 91 through a narrow nozzle 75. The selective release of the pressurized water is controlled by the trigger mech-

anism of the water gun. Since the present invention has the ability to operate at high pressures, the trigger release mechanism performs two functions. First, it controls the amount of water released, and second, the trigger mechanism serves as a safety valve. The trigger **65** of the present invention has a pinch bar extension **63** that pinches the exit hosing **67** for the pressurized water **91** against a stop **59** that is part of the main housing.

The pinch bar **63** is biased against the stop **59** by a calibrated spring **57**. The spring **57** is held at one end by a formation **55** of the main housing. The strength of the spring **57** in its biased configuration is calibrated, so that when the pressure of water **91** within the exit tubing **67** reaches a predetermined maximum valve, the spring **57** will allow the pinch bar **63** to rise and water **67** will be released until a safe pressure is maintained.

FIGS. **1** and **2** show only one embodiment of the present invention, and although these figures show the best mode of the invention, it should be understood that the present invention can be practiced in many forms other than that shown. The basis of the present invention is a double tank design that uses a manual water pump and a series of one-way valves and tubes to draw ambient water from one tank, pumping said water into a second tank, where it is presssurized against an air cushion and discharge that water selectively to the ambient air. The illustrated embodiment shown in FIGS. **1** and **2** shows a design for the present invention that is both efficient and inexpensive to manufacture. It should therefore be understood that in light of the appended claims, the invention may be practiced other than is specifically described, and individual parts may be modified or connected in orientations other than those shown.

What is claimed is:

1. A toy water gun having a housing with extending handle, trigger and barrel, said water gun comprising:

(a) a water storage reservoir connected to said housing, said water storage reservoir having at least one orifice formed thereon for the addition and subtraction of water therefrom; and said water storage reservoir having at least one vent to the surrounding ambient air;

(b) a pressurized water storage tank connected to said housing, said pressurized water storage tank having only one orifice through which all liquids and gasses pass;

(c) a pumping means that can selectively draw air or water or a combination thereof from said vented water storage reservoir, depositing same into said pressurized water storage tank to thus vary the ratio of air to water therein;

(d) a plurality of one-way flow valves, wherein at least one of said one-way flow valves prohibits water and air from flowing from said pressurized water storage tank to said pumping means and another at least one of said one-way flow valves prohibits water and air from flowing from said pumping means to said water storage reservoir;

(e) a nozzle having a narrow orifice therethrough, said nozzle being affixed to the end of said barrel;

(f) an avenue of release connecting said nozzle to said pressurized water storage tank; and

(g) a controlling means for regulating the flow of water and air through said avenue of release, said controlling means being attached to said trigger of said water gun and regulated by the movement of said trigger.

2. The water gun of claim **1**, wherein a one-way venting valve allows ambient air to enter said water storage reservoir through said vent while preventing water from exiting said water storage reservoir through said vent.

3. The water gun of claim **1**, wherein said pumping means is the reciprocation of a piston within a cylinder, said reciprocation of said piston having two-cycle strokes, a priming stroke wherein said piston retreats within said shaft, and a compression stroke wherein said piston advances within said shaft.

4. The water gun of claim **3** wherein said piston is affixed to a rod, said rod terminating at a handle.

5. The water gun of claim **3** wherein said priming stroke of said pumping means draws water or air into said cylinder from said water storage reservoir, past at least one said one-way flow valves.

6. The water gun of claim **5** wherein said compression stroke of said pumping means forces said water or said air, drawn from said water storage reservoir, out of said cylinder and into said pressurized water storage tank.

7. The water gun of claim **4** wherein said handle is slidably affixed to said barrel.

8. The water gun of claim **1** wherein said avenue of release is a flexible tube.

9. The water gun of claim **1** wherein the level and orientation of water within said water storage reservoir determines whether said pumping means draws water or air from within said water storage reservoir.

10. The water gun of claim **9** wherein a user of said gun can selectively draw air or water from said water storage reservoir with said pumping means by changing the orientation of said gun.

11. The water gun of claim **8** wherein said controlling means for regulating the flow of water through said avenue of release is a spring biased pinch bar that presses a length of said avenue of release against said housing of said water gun, collapsing said length of said avenue of release.

12. The water gun of claim **11** wherein said spring bias of said pinch bar is overcome by a force applied to said trigger, whereby said pinch bar is formed as part of said trigger and said force applied to said trigger through a lever action, causes said pinch bar to move in opposition of said spring bias.

13. The water gun of claim **1** wherein said water storage reservoir is detachable from said gun.

14. The water gun of claim **11** wherein said spring bias is created by a leaf spring having one end affixed to said housing of said gun.

15. The water gun of claim **2** wherein said one-way venting valve opens each time the air pressure within said water storage reservoir is less than that of the ambient air.

16. The water gun of claim **1** wherein said pressurized storage tank can safely hold water or air at a pressure of at least one hundred pounds per square inch.

17. The water gun of claim **1** wherein said water storage reservoir has a sealable orifice thereon for the addition of water thereto.

18. The water gun of claim **13** wherein water stored within said pressurized water storage tank can be discharged from said gun while said water storage reservoir is detached from said gun.

19. The water gun of claim **11** wherein said spring bias pinch bar is calibrated to yield to pressure within said avenue of release, when said pressure within said avenue of release exceeds a predetermined maximum value.

* * * * *

Attorney Docket No. 237-125

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Alan B. Amron Group Cert Unit:

For: Water Pressurized Gun

Serial No.: 07/767,244

Filed: September 27, 1991

PRELIMINARY AMENDMENT

Honorable Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

It is respectfully requested that the application identified above be amended as follows:

In The Specification:

Page 1, line 8 change "200,548, filed on August 30, 1991" to - 753,795, filed on September 3, 1991;

Page 1, line 20 change "by a piston which need not have appreciable amounts" to - in a separate piston chamber - ;

Page 1, line 21 change "of force required to withdraw" to -to reduce the force required to load-

Page 2, line 12 change "draws water through the outlet into" to - holds water in - ;

Page 2, line 13, change "where it can be held under pressure from the" to-.....-.

Page 4, line 21, after "piston chamber 26, and" insert - can be withdrawn by-;

Page 4, line 22, delete "is"

In The Claims;

Claim 1, line 3, change "having" to - leaving to;
3ft Ln. 11 Change "draws water through said outlet to be held" to - holds water -

REMARKS

The specification has been amended to correct the reference on page 2 to a prior-filed application, and to correct language of the specification and claims that is believed to be too limiting.

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Patent and Trademark Office

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NO. 292923

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ALAN AMRON
90 RODEO DRIVE, SYOSSET, NEW YORK 11791

10/01/91

COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

TO: WHOM IT MAY CONCERN, **RE: "THE OBLITERATOR PROJECT"**

I, ALAN AMRON HAVE CREATED THE FOLLOWING UPDATE TO MY SPRING LOAD WATER PRESSURE INVENTION AND AN ADDITION OF AN AIR PRESSURIZED SYSTEM USING THE COMMUNICATING VESSEL PRINCIPLE.

SOMETHING LIKE THE WAY A HYDRAULIC LIFT PUMP WORKS WERE YOU HAVE TWO CHAMBERS, ONE SMALLER THAN THE OTHER, PUTTING PRESSURE IN ONE SMALLER CHAMBER WITH MINIMAL FORCE TO BUILD UP GREATER PRESSURE IN THE OTHER CHAMBER THAT WOULD HOLD THE RESERVOIR OF WATER TO BE DISPENSED UNDER PRESSURE THRU A SMALL NOZZLE.

WE WOULD LIKE TO SHOOT UP TO 50 FEET IN DISTANCE, THAT HAS BEEN PROVEN TO TAKE FROM 40 TO 50 POUNDS PER SQUARE INCH OF PRESSURE. IF WE USE A CERTAIN AMOUNT OF FORCE IN THIS SMALLER CHAMBER, EITHER BY SPRING LOADED PULL OR PUMPING AIR OR WATER INTO A LARGER CHAMBER HOLDING THE WATER TO BE DISPENSED.

THE OBLITERATOR:

50 lbf PRESSURE IN A 2" X 8" CANISTER NEEDS A FORCE = 157 lbf

EXAMPLE: $\frac{88.5}{1.77}$ FORCE / AREA
AREA BEING 1 1/2" X 8" PRESSURE BEING 50 lbf 50=

THE LOADING OF THE FORCE BY AIR OR SPRING CAN BE DONE IN ANY NUMBER OF DIFFERENT MECHANICAL OR ELECTRICAL MEANS.

THE INVENTION IS NOT JUST OF HOW WE LOAD THE SPRING OR AIR PRESSURE, BUT MORE OF THE OVERALL OPERATION AND ENERGY SAVING SYSTEM WE HAVE CREATED TO HAVE MORE PLAY VALUE IN A NEW NOVEL AND UNIQUE WATER GUN TOY WITH A LOT LESS EFFORT THAN IS NEEDED TODAY.

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I HAVE COME UP WITH A MORE EFFICIENT AIR PRESSURIZED SYSTEM THAT WOULD HOLD AND REGULATE AIR PRESSURE TO ALLOW FOR A LONGER PLAY TIME AND A SHORTER PUMPING TIME (STROKES). WHAT

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ADVANTAGE OF THIS SYSTEM FOR AN AIR/WATER PRESSURE WATER GUN.

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2. SHOOTING DISTANCE UP TO 50 FEET.

3. HOLDS 1/2 TO 1 LITER WATER RESERVOIR.

SEE ROUGH DRAWINGS ENCLOSED.

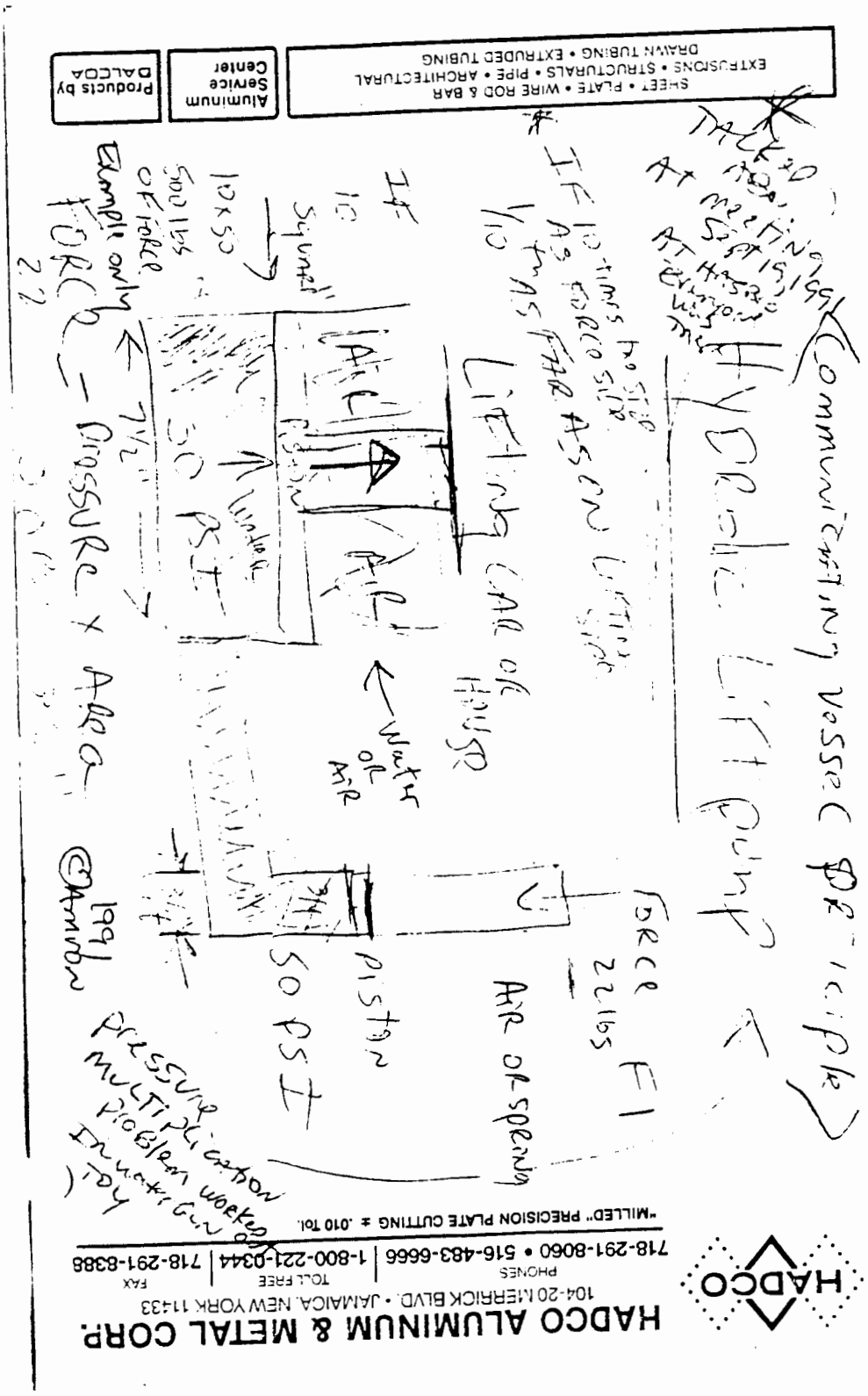
PLEASE FIND ENCLOSED MY ($6.00) SIX DOLLARS AND A SELF ADDRESSED STAMPED ENVELOPE.

THANK YOU,

ALAN AMRON
90 RODEO DRIVE, SYOSSET NEW YORK 11791

CC: JERRY DUNNE, ESQ. PATENT ATTORNEY

TALK-TO-IT PRODUCTS INC. *we create new beginnings*



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Hydraulic oblique project

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ADVANTAGE OF THIS SYSTEM FOR AN AIR/WATER PRESSURE WATER GUN.

1. ONLY NEEDS APPROXIMATELY 8 PUMPS OR PULLS TO FULLY PRESSURIZE APPROXIMATELY 50 PSI.

2. SHOOTING DISTANCE UP TO 50 FEET.

3. HOLDS 1/2 TO 1 LITER WATER RESERVOIR, or more.

SEE ROUGH DRAWINGS ENCLOSED.

PLEASE FIND ENCLOSED MY ($6.00) SIX DOLLARS AND A SELF ADDRESSED STAMPED ENVELOPE.

THANK YOU,

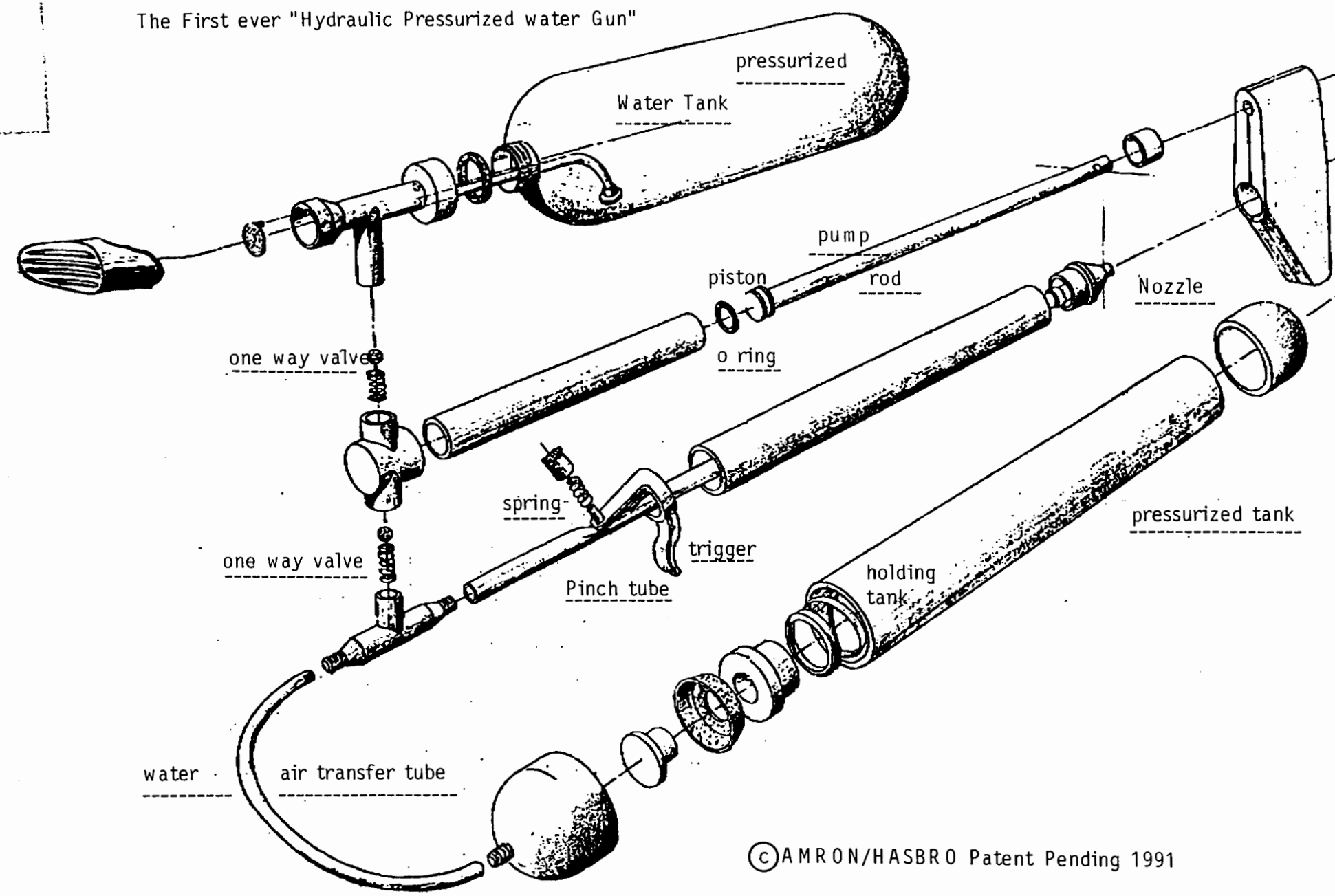
ALAN AMRON
90 RODEO DRIVE, SYOSSET NEW YORK 11791

CC: JERRY DUNNE, ESQ. PATENT ATTORNEY

2945986

Alan Amron Patent filed for on September 27, 1991 serial #07/767,244

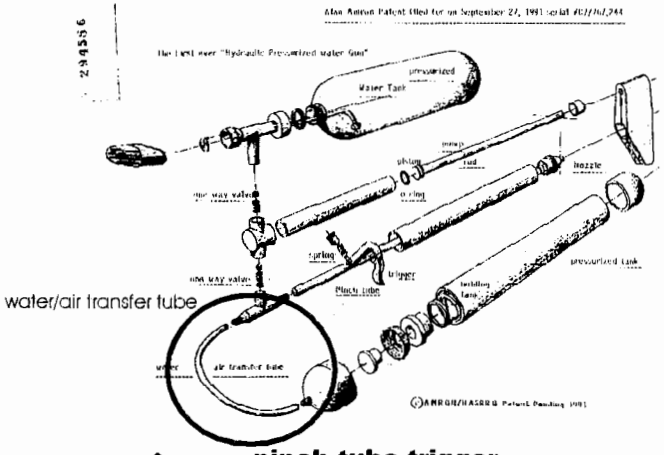
The First ever "Hydraulic Pressurized water Gun"



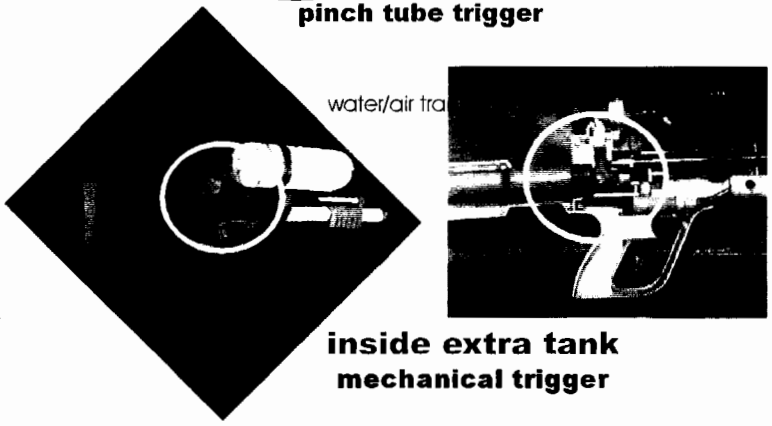
The following instructions are for all of the pictured identical systems. All are utilizing the Communicating Vessel Principle to pressurize air pressure water guns.

1. Pull pump rod/piston out, which will then suck water from the water tank.
2. Push pump rod/piston back in, this will then push that water into a smaller holding tank thereby fully pressurizing the water gun.
3. Pull the trigger to shoot water out of the nozzle.

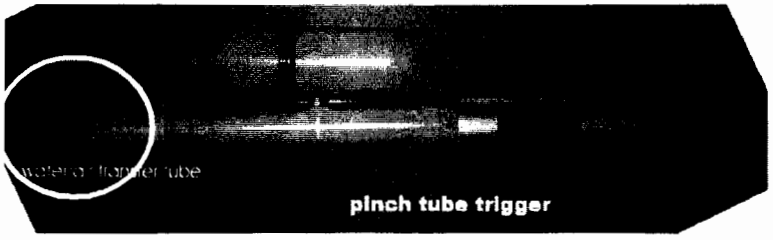
Amron 1991 Hydraulic Air Pressurized Water Gun



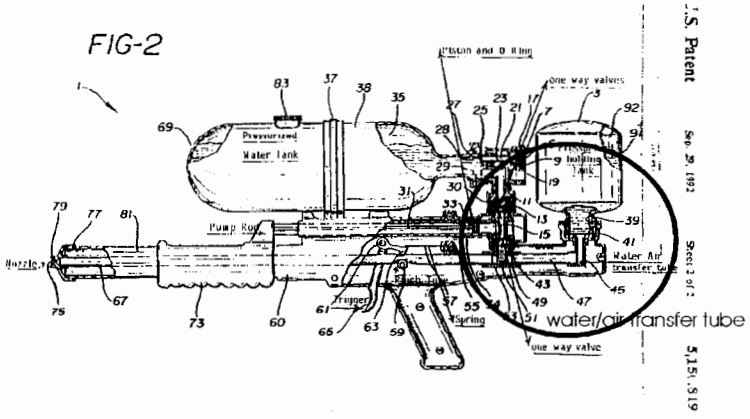
pinch tube trigger



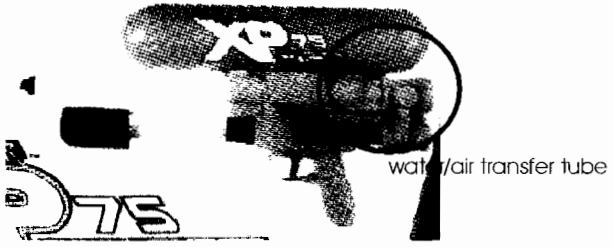
inside extra tank
mechanical trigger



Johnson et al. 1992 Hydraulic Air Pressurized Water Gun



pinch tube trigger



inside extra tank
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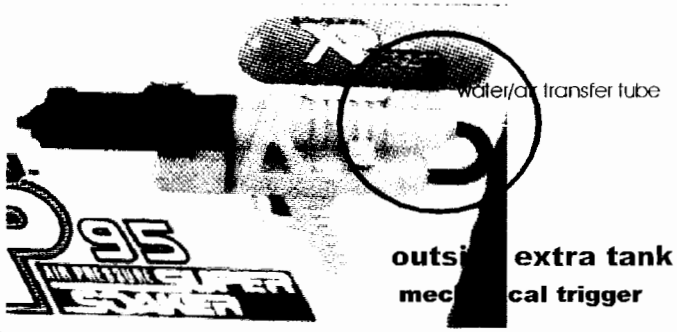

outsi extra tank
mec cal trigger

FACSIMILE TRANSMITTAL

HASBRO, INC.
1027 Newport Avenue
Pawtucket, Rhode Island 02862, U.S.A.
LEGAL DEPARTMENT

Telephone: (401) 727-5530
Telex: (230) 6814168
Facsimile: (401) 727-5089

SENT TO: MR. ALAN AMRON

COMPANY:

CITY/STATE: SYOSSET, NEW YORK

FACSIMILE NO.: 516 549 2772

FROM: EILEEN MOONEY
HASBRO, INC., PAWTUCKET, RHODE ISLAND 02862

DATE: JULY 13, 1992

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MESSAGE:

PATENT ASSIGNMENT

WHEREAS, HASBRO, INC., a corporation organized and existing under the laws of the State of Rhode Island, and having its principal place of business at 1027 Newport Avenue, Pawtucket, Rhode Island, 02862, (hereinafter referred to as the Assignor), hereby sells and assigns to ALAN B. AMRON, a citizen of the United States of America, of 90 Rodeo Drive, Syosset, New York, 11791 all rights, title and interest in and to any improvements in the WATER GUN, and the application for United States Letters Patent therefore, executed concurrently herewith, and all original and reissued patents granted therefore, and all divisions and continuations thereof, including the subject matter of any and all claims which may be obtained in every such patent, and all priority rights under the International Convention for the Protection of Industrial Property for every country of the Union, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof, and covenants that Assignor has full right so to do, and agrees to communicate to said Assignee all facts known to Assignor respecting said improvements, whenever requested, and will testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, and make all rightful oaths.

HASBRO, INC.

Donald M. Robbins
By: Donald M. Robbins

TITLE: Vice President

DATE: July 13, 1992

ALAN B. AMRON

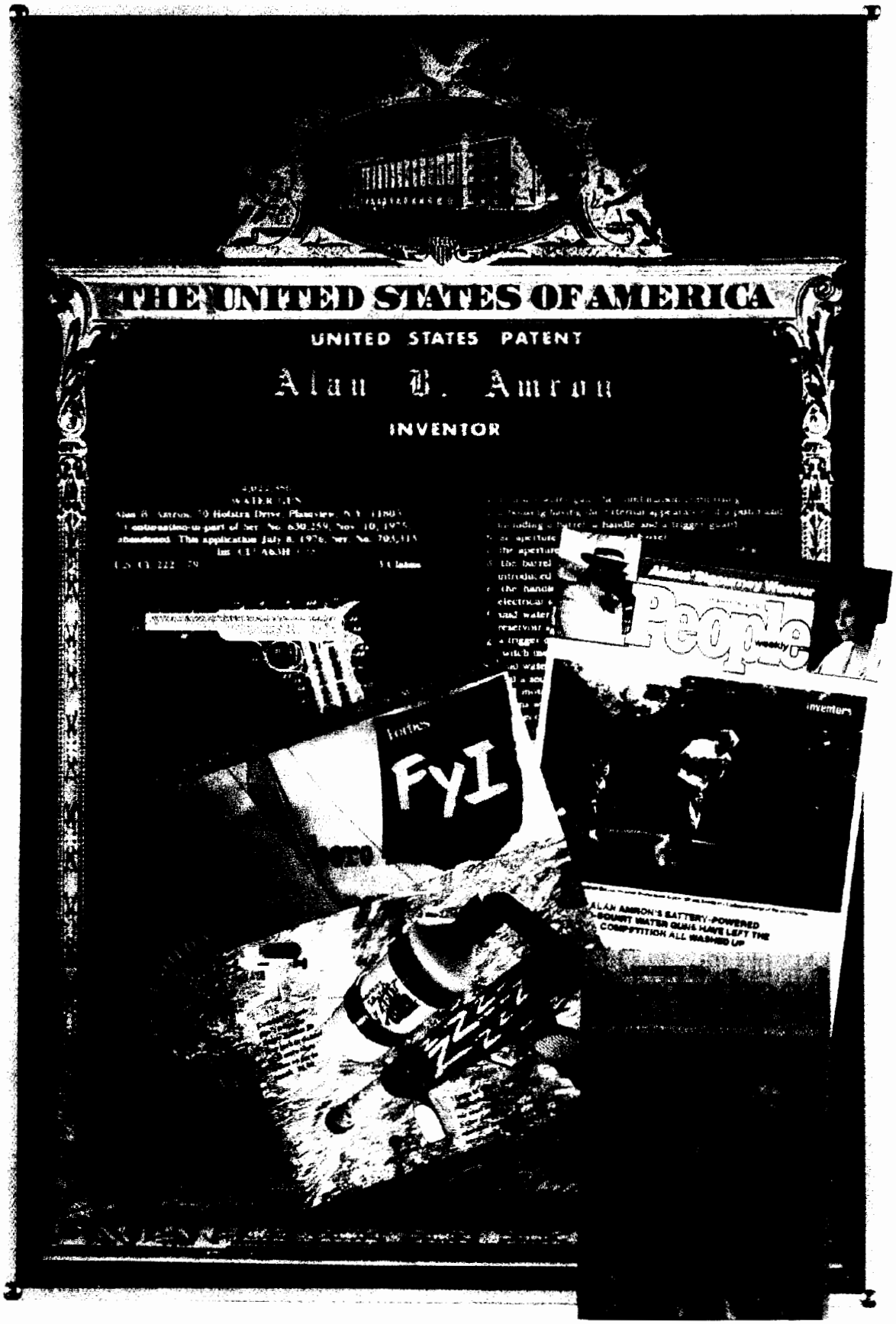
TITLE: ———

DATE: 7/13/92

STATE OF RHODE ISLAND
COUNTY OF PROVIDENCE

Subscribed and sworn to before me this 13th day of July, 1992.

Notary Public


THE UNITED STATES OF AMERICA
UNITED STATES PATENT
Alan B. Amron
INVENTOR
People
Forbes
FYI
Inventors
ALAN AMRON'S BATTERY-POWERED
SOAKER WATER GUNS HAVE LEFT THE
COMPETITION ALL WASHED UP

United States Patent [19] [11] 4,022,350
Amron [45] May 10, 1977

[54] **WATER GUN**

[76] Inventor: **Alan B. Amron**, 70 Hofstra Drive, Plainview, N.Y. 11803

[22] Filed: **July 8, 1976**

[21] Appl. No.: **703,315**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 630,259, Nov. 10, 1975, abandoned.

[52] U.S. Cl. 222/79; 222/333
[51] Int. Cl.[2] A63H 3/18
[58] Field of Search 222/79, 333, 383; 239/332, 587

[56] **References Cited**

UNITED STATES PATENTS

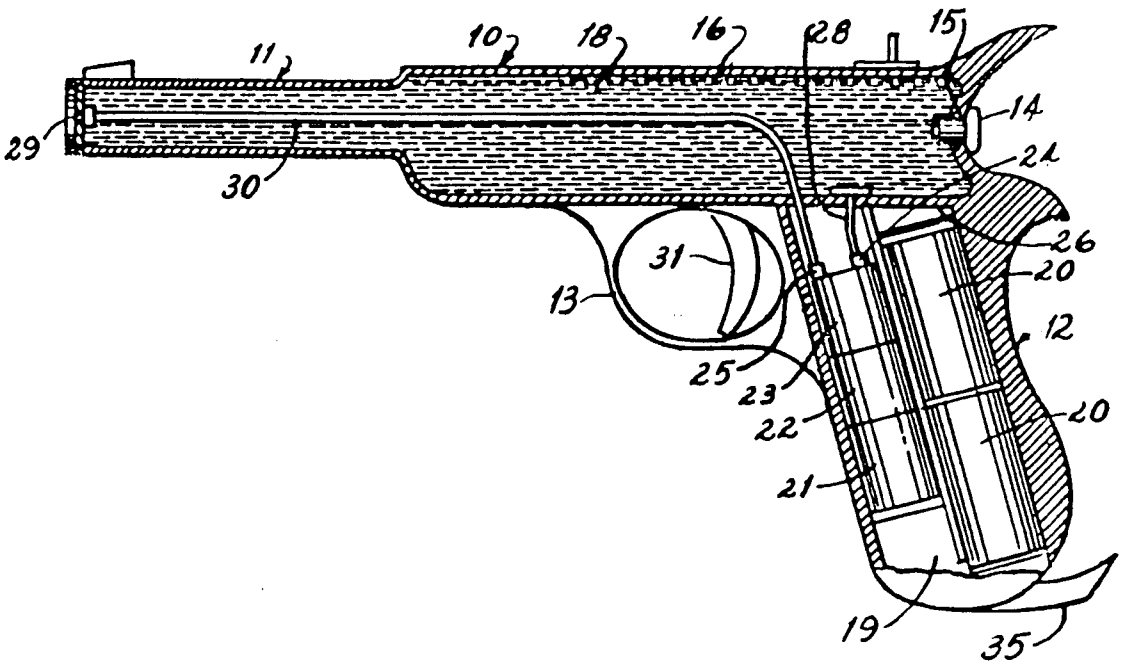
2,285,292	6/1942	Mangels	222/79
3,374,708	3/1968	Wall	222/79 X
3,901,449	8/1975	Bochmann	239/332

Primary Examiner—Stanley H. Tollberg
Attorney, Agent, or Firm—Charles Marks

[57] **ABSTRACT**

A toy water gun is provided with a battery driven motor and pump assembled with a chamber communicating with a water reservoir and a nozzle in the gun. When the motor and pump are energized, intake and exit valves operate alternately to determine a series of spurts of water from the chamber through the nozzle.

3 Claims, 8 Drawing Figures



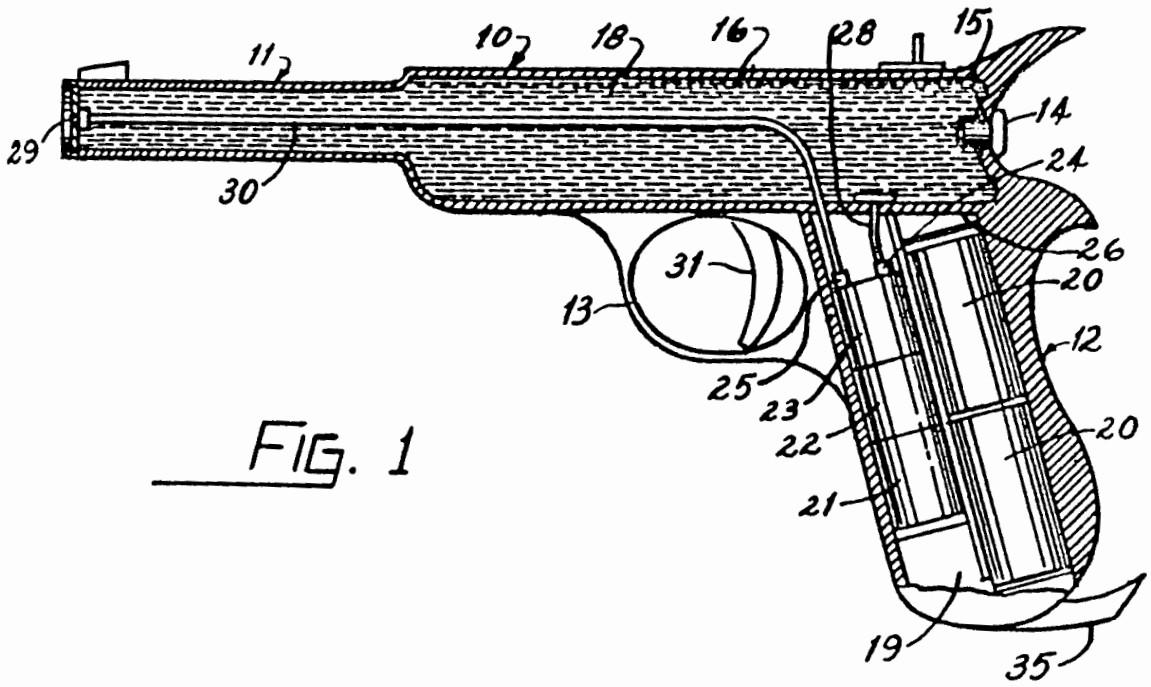

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FIG. 1

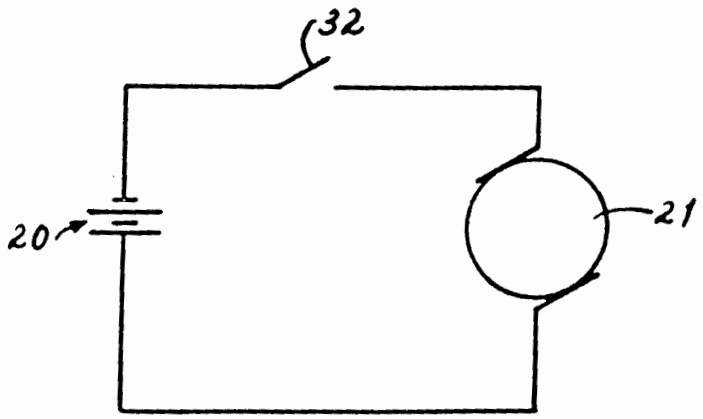
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FIG. 2

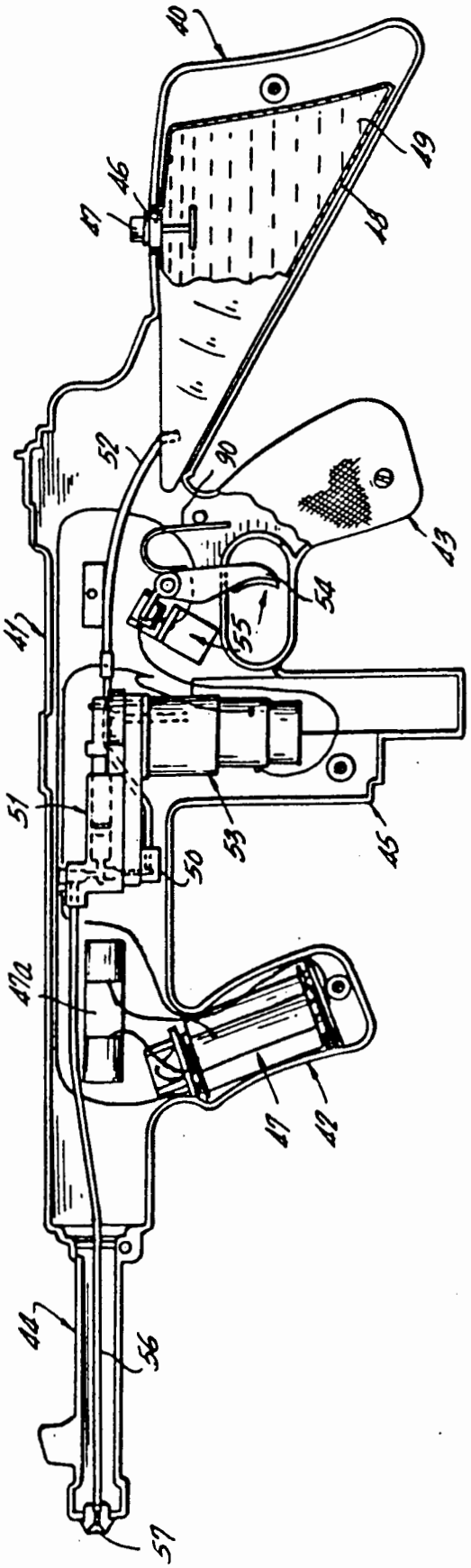

FIG. 3

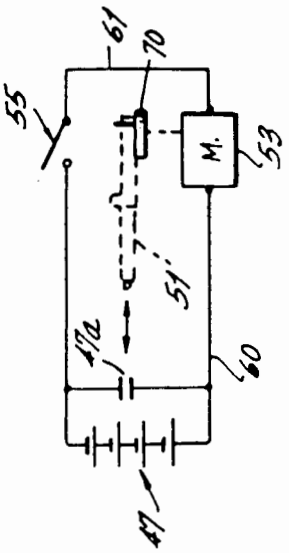

FIG. 4

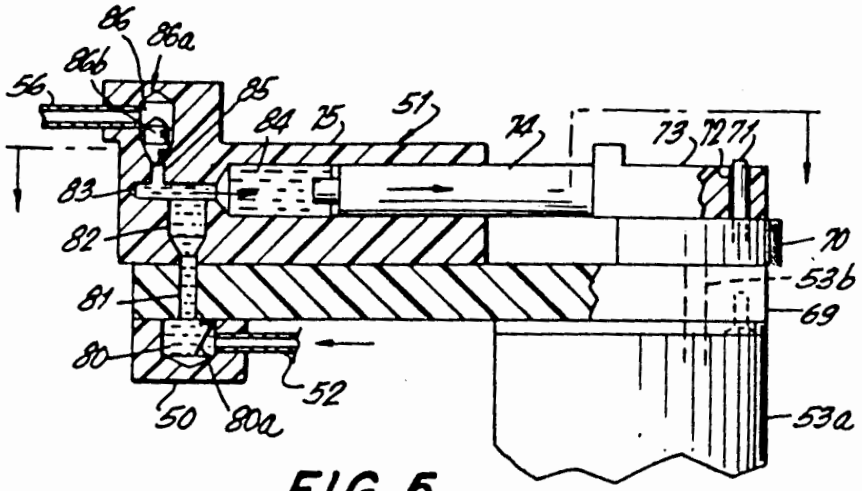

FIG. 5

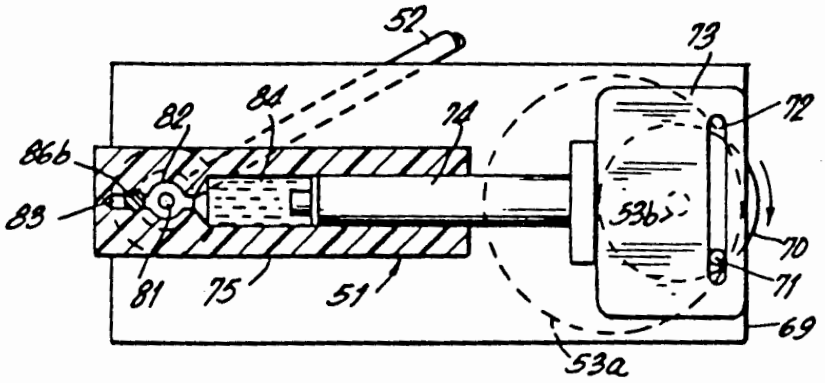

FIG. 6

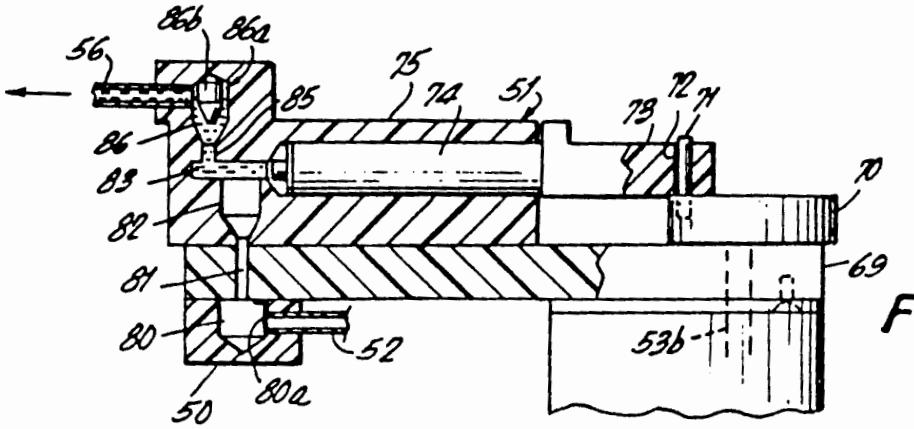

FIG. 7

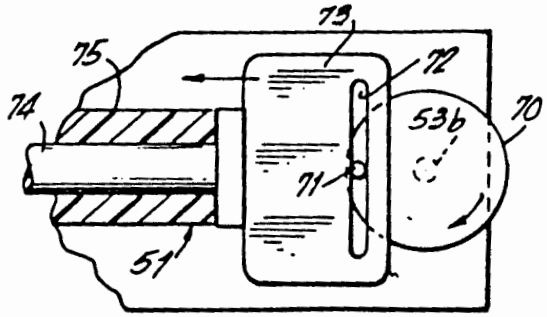

FIG. 8

WATER GUN

BACKGROUND OF THE INVENTION

1. Field of the Invention

This application is a continuation-in-part of application's prior copending application Ser. No. 630,259 filed Nov. 10, 1975 and subsequently abandoned. This invention relates generally to toy water guns and is particularly concerned with electrically operated toy water guns.

2. DESCRIPTION OF THE PRIOR ART

Conventional toy water guns usually depend for their operation upon a trigger actuated mechanical pumping means and produce a continuous stream of water for a period of time corresponding with the actuation of the trigger and the level of pressure produced. Such guns, however, often rely upon a plurality of trigger actuations to accomplish a series of shots, i.e., spurts, of water therefrom and, when operated in this way, quickly tire the user.

The present invention solves these problems. Thus, it is an object of the present invention to provide an improved water gun which can be fired in a series of shots by one actuation of its trigger.

Another object of the invention is to provide such a water gun which is electrically operated and which will maintain a high water pressure over a substantial period of time.

Still another object of the invention is to provide such a water gun which incorporates a simple pump and valve means to accomplish its purposes.

Yet another object of the invention is to provide such a water gun which is of simple, economical and sturdy design.

Other and further objects of the invention will become apparent from the following description when read in conjunction with the accompanying drawing.

SUMMARY OF THE INVENTION

The present invention employs a housing in the form of a conventional pistol but having a reservoir accommodating a predetermined quantity of water. The housing includes a handle having a water-tight compartment accommodating one or more batteries actuated by a trigger whereby a switch may be cloased to energize a motor driven pump which is also located in the handle. The pump draws water from the reservoir into a chamber and then discharges the water therefrom through a nozzle in the barrel of the pistol. The intake of the water into the chamber is accomplished through a one-way entry valve and its discharge is accomplished through a pressure operated, one-way exit valve. When the chamber is full, the one-way valve is closed, thereby permitting discharge through the pressure operated one-way exit valve. With such discharge, however, the pressure in the chamber drops, thereby permitting the entry valve to open so as to draw more water into the chamber and thereafter close when the water pressure builds up to a point where the water may be discharged through the exit valve. The resulting series of spurts of water will continue as long as the trigger is actuated and the water supply in the reservoir remains.

In a modified form of the invention, the housing is in the form of a conventional, portable machine gun wherein the stock includes a water tight compartment communicating with a battery operated motor and pump assembly and valves in the vicinity of the handles of the gun to accomplish a series of spurts of water from the barrel thereof in the general manner previously described.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a cross-sectional, diagrammatic view of one embodiment of the invention;

FIG. 2 is a circuit diagram of the electrical system employed in such embodiment of the invention;

FIG. 3 is a modified form of the invention arranged as a machine gun;

FIG. 4 is a circuit diagram of the electrical system employed in said modified form of the invention;

FIG. 5 is a fragmentary, cross-sectional view of the valve system employed in said modified form of the invention;

FIG. 6 is a view taken about the line 6—6 of FIG. 5;

FIG. 7 is another fragmentary, cross-sectional view of the valve system employed in said modified form of the invention;

FIG. 8 is a view taken about the line 8—8 of FIG. 7.

Throughout the various views, similar numerals are employed to refer to similar parts of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As shown in FIG. 1 of the accompanying drawing, one embodiment of the present invention comprises a housing, generally designated by the numeral 10, having the external appearance of a pistol. The housing 10, includes a barrel 11, a handle 12 and a trigger guard 13. The barrel 11 is provided with a removable plug 14 engaged with an aperture 15 communicating with a reservoir 16 in the barrel 11 wherein a quantity of water 18 may be accommodated.

The handle 12 comprises a first chamber 19 accommodating energizing means such as one or more electrical batteries 20. Chamber 19 also accommodates a motor 21, a pump 22 and a second chamber 23 having a one-way intake valve 24 and a one-way exit valve 25. Chamber 19 is sealed against leakage from the reservoir 16 by a partition 26.

The intake valve 24 communicates with the reservoir 16 by means of a drain tube 28 which extends through the partition 26. The exit valve 25 communicates with a nozzle 29 by means of an exhaust tube 30 which also extends through the partition 26, the said nozzle 29 being seated in the mouth of the barrel 11.

A trigger 31 is provided within the trigger guard 13 and functions as a single pole single throw switch (not shown in FIG. 1) which is indicated diagrammatically by the numeral 32 in FIG. 2. When the trigger 31 is pulled, the switch 32 is closed, thereby permitting the batteries 20 to energize the motor 21 and actuate the pump 22. The electrical circuit involved is depicted in FIG. 2. Upon actuation of the pump 22, water is drawn from the reservoir 16 through the drain tube 28 and intake valve 24 into the chamber 23 where it is accumulated and then discharged through exit valve 25, exhaust tube 30 and nozzle 29.

An important feature of the invention resides in the fact that the water is discharged from the nozzle 29 in a series of spurts. This is accomplished by having the intake valve 24 and exit valve 25 permit alternate flow of water therethrough, such mode of operation being accomplished by means well known in the art. For example, the intake valve 24 may be in the form of a

one-way valve and the exit valve 25 may be in the form of a spring-biased poppet valve. Thus, upon the operation of the pump 22, water may be drawn through the intake valve 24 until the chamber 23 is filled, during which time the exit valve 25 remains closed. Thereafter, upon continued operation of the pump 22, the water pressure within the chamber 19 increases so as to close the intake valve 24 and open the exit valve 25, thereby permitting discharge of a quantity of water until the pressure within the chamber 23 decreases so as to permit opening of the intake valve 24 and closing of the exit valve 25. Since the motor 21 operates at high speed and the pump 22 is geared down to permit a correspondingly substantial power, it will be seen that the spurts of water thus produced will emerge from the nozzle 29 with great rapidity, thereby simulating a series of "shots" from the pistol which will continue during the actuation of the trigger 31.

The foregoing description of the operation of the intake and exhaust valves of the chamber 23 is intended to be illustrative only. It is to be understood that other means, such as piston-operation may also be employed to accomplish similar results, such operation including intake and exhaust strokes of the piston in the chamber 23 so as to provide a series of spurts of water from the chamber 23 through the nozzle 29. This mode of operation may be more clearly understood from a consideration of the subsequently described modified form of the invention.

A closure member 35 is hingeably secured to the handle 12 so as to permit access to its interior when desired.

A modified form of the invention is depicted in FIG. 3 through 8. As may be seen in FIG. 3, this form of the invention has the external conformation of a machine gun and includes a shoulder stock 40, a body portion, generally designated by the numeral 41, front and rear handles, generally designated by the numerals 42, 43, a barrel, generally designated by the numeral 44, and an ammunition clip receptacle, generally designated by the numeral 45.

The shoulder stock 40 is provided with an aperture 46 accommodating a removable plug 47 communicating with a reservoir 48 within the shoulder stock 40, said reservoir 48 accommodating a quantity of water 49. The reservoir 48 communicates with a housing 50 of a valve and pump assembly, generally designated by the numeral 51, disposed within the body portion 41, said communication being by means of a tube 52 connected to said reservoir 48 and said housing 50. The valve and pump assembly 51 surmounts a cam and motor assembly, generally designated by the numeral 53, located within the ammunition clip receptacle 45 and energized by a suitable source of electricity such as batteries 47, disposed within the front handle 42 and activated by a trigger 54 and switch 55.

As hereafter indicated, when the cam and motor assembly 53 is energized, water is drawn from the reservoir 48 through the tube 52 into the valve and pump assembly 51, whence it is discharged through tube 56 and nozzle 57 in the barrel 54, such discharge being intermittent or in spurts of water.

The electrical system involved is depicted diagrammatically in FIG. 4 and is similar to the electrical system employed in the first described embodiment of the invention. As indicated in FIG. 4, the electrical system includes the previously mentioned cam and motor assembly 53, batteries 47, a condenser 47*a* connected in parallel with the batteries 47, a switch 55, and conductors 60, 61, 62, the [illegible] and motor assembly 53 being surmounted by the valve and pump assembly 51 depicted in broken lines.

The operation of the valve and pump assembly 51 may be better understood from a consideration of FIGS. 5, 6, 7 and 8. As may be seen in FIGS. 5 and 6, the motor 53*a* is provided with a shaft 53*b* extending through a plate 69 and connected to a circular cam 70 having an upright eccentric pin 71 slidably engaged with a slot 72 formed in a base plate 73 engaged with a reciprocable piston 74. The piston 74 is accommodated within a cylinder 75 in the valve and pump assembly 51. The aforementioned tube 52 communicates with an intake valve 80 within the housing 50, the said valve 80 being surmounted by an aperture 81 formed in the plate 69 and communicating between said valve 80 and a chamber 82. Valve 80 is provided with a one-way valve gate 80*a*. Said chamber 82 also communicates with a duct 83 extending from the interior 84 of the cylinder 75. The duct 83 also communicates through channel 85 with the chamber 86 of exit valve, generally designated by the numeral 86*a* and having a poppet member 86*b*. Chamber 86 communicates with the aforementioned tube 56.

It will be seen that when the switch 55 is closed by the trigger 54 so as to activate the motor 53*a*, the cam 70 is rotated, thereby causing the pin 71 to reciprocate the piston 74 within the cylinder 75 and alternately draw water from the reservoir 48 into the interior 84 of the cylinder 75 and discharge it through the tube 56 and nozzle 57 of the barrel 44. As shown in FIGS. 5 and 6, the piston 74 is disposed at the end of its intake stroke whereby water is drawn through tube 52, intake valve 80, chamber 82 and into the interior 84 of cylinder 75. Thereafter, with further rotation of the cam 70, as depicted in FIGS. 7 and 8, the piston 74 accomplishes its exhaust stroke whereby it is moved to the opposite end of the cylinder 75 so as to discharge the water in the interior 84 of the cylinder 75 through duct 83, channel 85, exit valve 86*a* and tube 56 connected to the nozzle 57 depicted in FIG. 3. During this exhaust stroke, valve gate 80*a* blocks return of the water to the reservoir depicted in FIG. 3. It is to be understood that valves 80 and 86*b* may comprise any of a variety of one-way or poppet valves of conventional design. Upon further rotation of the motor the piston 74 performs its intake stroke whereby it is returned to the position depicted in FIGS. 5 and 6 and is ready to begin its above described exhaust stroke again.

Thus, it will be seen that by means of this reciprocating movement of the piston 74, water is alternately drawn from the reservoir 48 and discharged through the nozzle 57, such discharge being interrupted by the said intake strokes so that the discharge is accomplished intermittently or in spurts rather than in a continuous stream.

It will also be observed that this effect is achieved during continuous pull of the trigger 54 whereby the switch 55 is closed, and does not require repeated or a series of pulls of the trigger 54. The trigger 54 is biased by a spring 90, so that when released, the trigger 54 opens the switch 55 and thereby terminates the intermittent discharge of water from the nozzle 57.

I claim:

1. In a toy water gun, the combination comprising:

a. a housing having the external appearance of a pistol and [illegible]ding a barrel, a handle and a trigger guard;

b. an aperture formed in said barrel;

c. the aperture being provided with a removable plug;

d. the barrel including a reservoir accommodating water introduced through said aperture;

e. the handle including a first chamber accommodating electrical means and water distribution means;

f. said water distribution means communicating with said reservoir and a nozzle provided in the barrel;

g. a trigger disposed within said trigger guard and including switch means;

h. said water distribution means including a motor, a pump and a second chamber;

i. said motor and pump being energized by said electrical means when said switch means is actuated by said trigger;

j. said second chamber being provided with intake and exit valves operating in sequence, whereby a series of spurts of water is drawn from the reservoir through the intake valve into the second chamber and dispensed therefrom through the exit valve and said nozzle when said motor and pump are energized;

k. said handle being provided with closure means.

2. In a device according to claim 1, a water-tight partition between said reservoir and said first chamber.

3. In a toy water gun having the external conformation of a machine gun including a shoulder stock, body portion, front and rear handles, a barrel and an ammunition clip receptacle, the combination comprising:

a. [illegible]ervoir formed within said shoulder stock and adapted to accommodate a quantity of water;

b. an aperture formed in said shoulder stock and communicating with said reservoir;

c. a removable plug accommodated within said aperture;

d. reciprocable pump and valve means disposed within said body portion;

e. tubular means communicating between said reservoir and said reciprocable pump and poppet valve means;

f. tubular means communicating between said reciprocable pump and poppet valve means and a nozzle formed in said barrel.

g. electric battery means disposed within one of said handles;

h. a motor and cam assembly communicating with a reciprocable piston in said reciprocable pump and poppet valve means;

i. a spring-biased trigger disposed within said body portion and communicating with a switch;

j. said motor and cam assembly being energized by said electric battery means when said spring-biased trigger actuates said switch, thereby reciprocating said piston and drawing water from said reservoir through said poppet valve means and discharging it intermittently through said nozzle;

k. one-way valve means disposed between said reciprocable pump and poppet valve means and said reservoir.

* * * * *

US005322191A

United States Patent [19]

Johnson et al.

[11] Patent Number: 5,322,191

[45] Date of Patent: * Jun. 21, 1994

[54] **LOW PRESSURE, HIGH VOLUME PRESSURIZED WATER GUN**

[76] Inventors: **Lonnie G. Johnson**, 4030 Ridgehurst Dr., Smyrna, Ga. 30080; **Bruce M. D'Andrade**, 3 Ten Eyck Rd., Whitehouse Station, N.J. 08822

[*] Notice: The portion of the term of this patent subsequent to Sep. 29, 2009 has been disclaimed.

[21] Appl. No.: **902,078**

[22] Filed: **Jun. 22, 1992**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 841,762, Feb. 28, 1992, Pat. No. 5,150,819, which is a continuation of Ser. No. 680,247, Apr. 3, 1991, abandoned, which is a continuation-in-part of Ser. No. 578,145, Sep. 6, 1990, Pat. No. 5,074,437.

[51] Int. Cl.[5] **A63H 03/18**

[52] U.S. Cl. **222/79**; 222/175; 222/401

[58] Field of Search 222/79, 175, 400.7, 222/400.8, 130, 401, 325, 396; 239/597-601, 99, 333; 42/54; 446/473; 273/349; 124/70, 73

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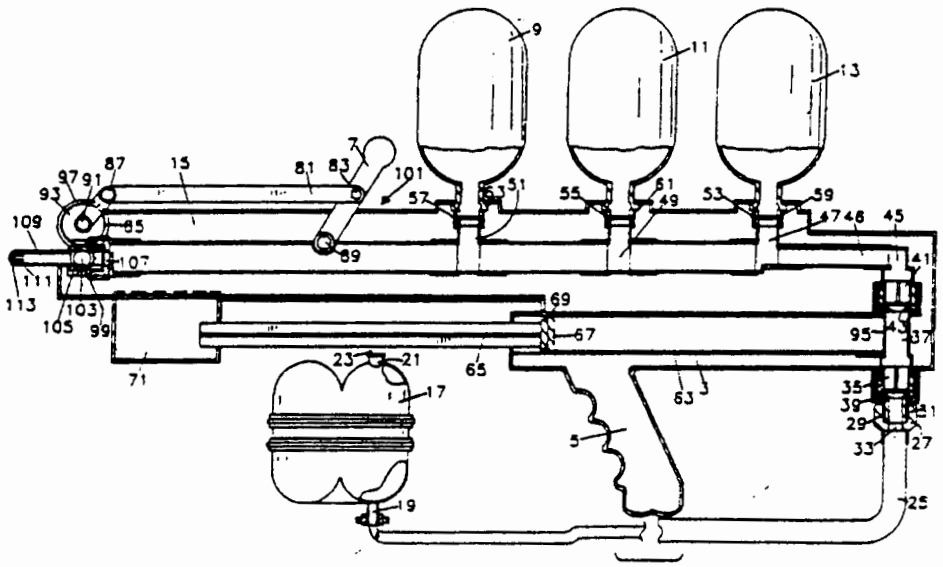
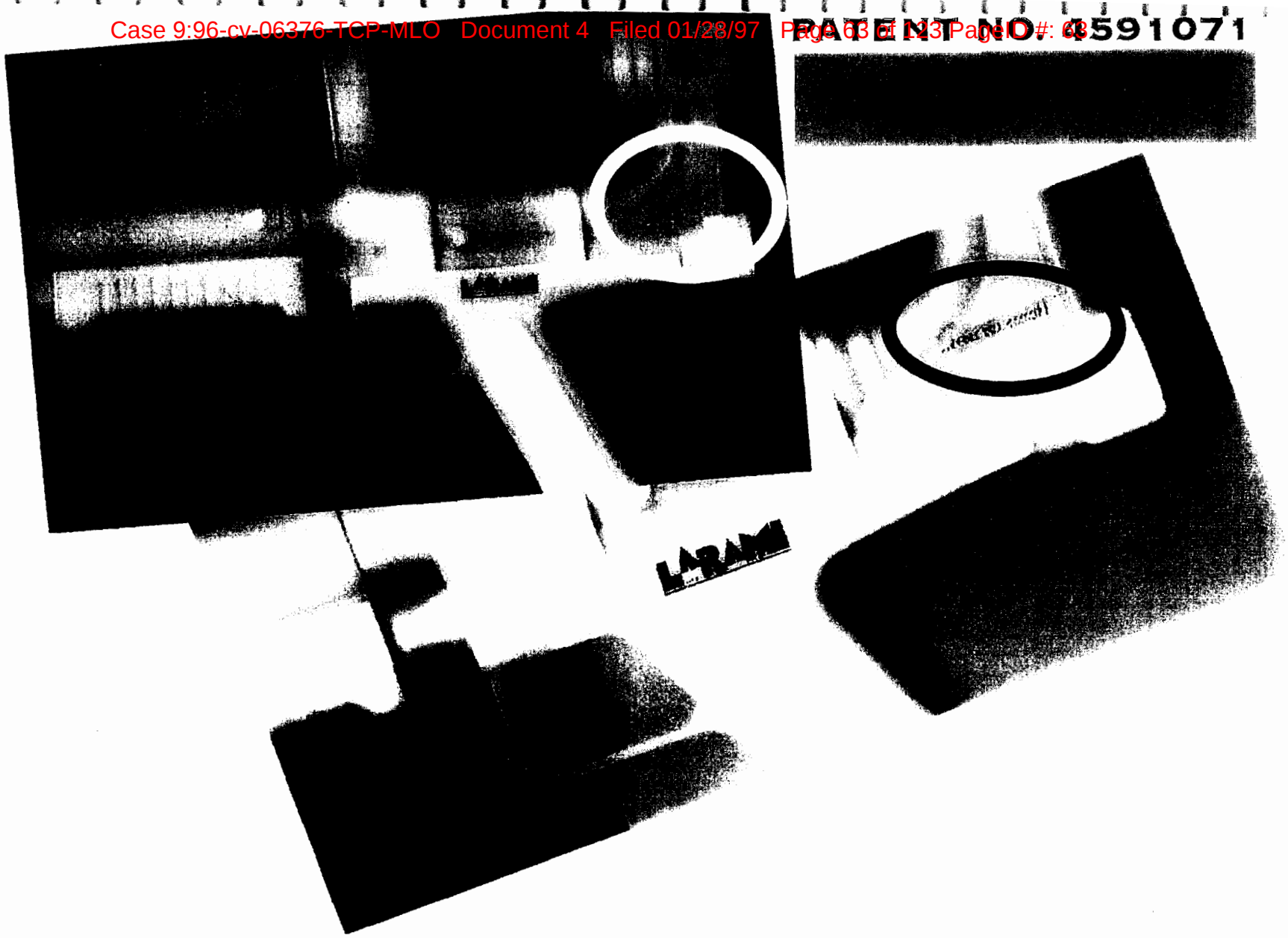
Primary Examiner—Gregory L. Huson
Attorney, Agent, or Firm—Kenneth P. Glynn

[57] **ABSTRACT**

The present invention is a toy water gun having a housing with extending handle, a release mechanism and barrel. The water gun is connected to at least one water source external from and connected to the housing. In preferred embodiments, the water source is remote and has an indirect connection, e.g. by tubing or hosing, external of said housing and having a vent to surrounding ambient air so air may enter therethrough. Also included is a pressurized air and water storage tank external from and connectable to the housing. The pressurized tank has an orifice between said pressurized tank and said housing through which all liquids and gasses pass. There is also a pumping means for withdrawing air or water from the source or sources, and for depositing the withdrawn air or water into the pressurized tank. A plurality of one-way flow valves is included wherein at least one one-way flow valve prohibits water and air from flowing from the pressurized tank to the pumping means, at least one said one-way flow valve prohibits water and air from flowing from the pumping means to the source or sources of air and water. There is a nozzle with a wide orifice therethrough, which affixed to the end of said barrel and an avenue of release connecting the nozzle to the pressurized tank. There is also a controlling means for regulating the flow of water and air through the avenue of release, the controlling means being actuatable by a release mechanism.

25 Claims, 3 Drawing Sheets





'071 PATENT IS FOR A SQUIRT GUN WHOSE RESERVOIR IS CONTAINED IN THE BARREL OF THE GUN. NOT WHAT LARAMI IS MAKING HERE!

THIS IS A FALSE AND MISLEADING NOTICE OF A PATENT THAT IS NOT REPRESENTATIVE OF THE PRODUCT ACTUALLY BEING SOLD.

reservoir had to be located remotely from the pressurizing means, that the invention was self-contained and had a high-pressure aspect with a single orifice and water proof seal. This was sufficient to differentiate the invention from Stelzer, which had its reservoir attached to the pressurizing means, i.e. to operate the Stelzer device the reservoir itself had to be manipulated back and forth along with the slider.

14. Mr. Johnson's concept for an air pressurized squirt gun was the subject of another patent. The so-called '071 Patent was for a squirt gun whose water reservoir was contained in the barrel of the gun. This design presented engineering problems which led to the further advance of the removable reservoir. On the prior design the slider is in the same location. Johnson also received another patent on a water gun, the so-called '946 Patent. This design seeks to replicate a machine gun. In a letter to Lanard's attorney dated January 28, 1991, Larami's attorney represented that the Super Soaker was protected by the '071 and '946 patents.

15. This claim of protection led to a prior lawsuit between these parties. Lanard sued Larami in Federal District Court in New York for false patent marking, misrepresentation, unfair competition and a declaratory judgment on non-infringement. This action was settled without any admissions of liability when Larami agreed it would cease marking the Super Soaker with those patent numbers.

16. Larami's conduct which led to the prior suit is the basis of Lanard's claim of inequitable conduct. Lanard alleges that Larami failed to divulge to the Patent Examiner that it, Larami, had previously contended the invention it was presently seeking to patent might have been covered by previous patents.

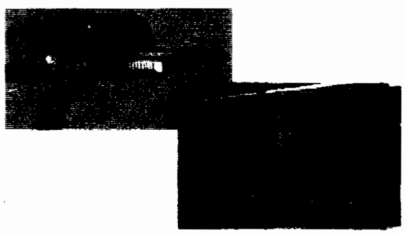
Larami/Hasbro False Statements Time Line Chart

Super Soaker water guns...

11/89	Warning given of mismarking Patent # 4, 022,350 products.
02/90	Letter from Larami admitting wrong doing and will stop mismarking the patent.
04/90	Lanard sued Larami for misuse and mismarking of the Super Soaker products.
07/91	Larami ran intimidating ad with false statements of Trademark Registration on the Super Soaker name.
10/91	Larami ran ad with false claims of broad Patent protection on the Super Soaker product.
01/92	Larami Agreed to stop Mismarking with Patent #4,591,071 on the Super Soaker products.
06/92	Point of sale 6 foot banners in stores coast to coast making false statement of Trademark Registration on the Super Soaker name.
06/92	Lawyers letter warning Larami to stop making false statements of Trademark Registration on the Super Soaker name.
10/93	Larami Falsely announced in the toy trade papers they received Trademark Registration on the Super Soaker name.
06/96	Full page Ad falsely claiming Trademark Registration for the Super Soaker name.
06/96	Warning letter to stop making false claims of Trademark Registration the Super Soaker name.
08/96	Full page ad falsely claiming Trademark Registration on the Super Soaker name.

4 Warnings **2 Courts notified**

8 False Statement Occurrences



The Law States...

That applicant has used labels bearing false statement of registration is ground for refusing registration Four Roses Products Co v Small Grain Distilling & Drug Co 1928 29 F 2d 959, 58 App D.C. 299 See also Levy v Uri 1908 31 App D C 441

How should we base intentional False Statements?

(A.) By how many warnings one gets to stop?

Larami received four warnings to stop making these False Statements...

(B.) How many times they committ these False Statements in spite of these warnings?

Larami/Hasbro committed these False Statements Eight times, in spite of the four warnings...

(C.) By how many people actually saw, and were effected by, these False Statements?

Millions of people saw these False Statements, including all of the people in the toy industry...

(D.) Did the persons making these false statements benefit from them?

Larami/Hasbro has gained millions of dollars by making these False Statements by falsely, but successfully, keeping all thier competition out of their water gun business...

TO: ALAN ARNON
FR: BILL QUINLAN

OCTOBER 2, 1991

RE FAX - 9 187/91

P. 2 OF 2

WARNING

Larami Corporation of Philadelphia, PA announces that the U. S. Patent and Trademark Office has agreed to Award a patent for its "SUPER SOAKER" water guns. Larami will enforce its rights in the "SUPER SOAKER" guns to the full extent of the law. The allowance of the patent application and the granting of broad protection by the U. S. Patent and Trademark Office came after the Patent Examiner received information about the huge commercial success of Larami's "SUPER SOAKER" water guns.

Larami is also taking all necessary steps to expedite the issuance of its foreign patents as well.

LARAMI CORPORATION
340 N. 12TH STREET,
PHILADELPHIA, PA 19107
U. S. A.
TEL. 215-923-4900
FAX. 215-923-1164

ATTN: LIBRIAN
11852811278
FAX#

South China Morning Post
OCT 2, 1991
PAID ADD

May 22, 1990

FACSIMILE AND CONFIRMING MAIL

Gerard F. Dunne, Esquire
Wyatt, Gerber, Burke & Badie
645 Madison Avenue
New York, New York 10022

Re: DRENCHER/Larami Corp.
Your File No. 237-71

Dear Mr. Dunne:

This letter confirms my telephone advice to your office today and conforms to our recent discussion.

Larami Corp. is abandoning its use of "Power Drencher" as a trademark for a water gun.

It will not make or print or have made or printed for it any further packaging, goods, or other material with that trademark.

It will exhaust its present stocks of packaging, goods, and other material with that trademark, and said stocks of packaging, goods, and other material with that trademark will be exhausted on or before the last day of July, 1990.

This abandonment is without prejudice, and does not constitute an admission of trademark validity, enforceability, ownership, conflict or priority, but rather is made as a business decision to avoid conflict.

Sincerely yours,

Paul Malsen

PM:kks
cc: S. Collar Waters

EXHIBIT P036

1550-05-22 16:48

HANGLEY CONNOLLY EPSTEIN CHICCO FOXMAN & EWING

A PROFESSIONAL CORPORATION

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July 9, 1992

Via Telecopy

Gerard F. Dunne, Esquire
645 Madison Avenue, 11th Floor
New York, NY 10022

RE: Larami Corporation v. Amron, et al

Dear Gerry:

I am in receipt of copies of letters dated July 7, 1992 from Alan Amron and from your paralegal, F. J. Penney Zahler, to Al Davis requesting return of certain toy prototypes submitted to Larami. While disclaiming any obligation to return any prototypes submitted to Larami by your client, Larami will make arrangements for the return of those prototypes if and when they are located. So far, they have not been located.

I previously cautioned you against direct contacts with my client that violate Rule 4.2 of the Rules of Professional Responsibility. The obligations imposed by the Rules cannot be avoided by delegating responsibility to paralegals. In addition to the ethical dimension, I think it is most unwise that there be any communications between our clients other than through counsel. I trust you will advise Mr. Amron of our position and, of course, abide by it yourself.

Very truly yours,

Gary A. Rosen

GAR/gvn

Law Offices of
GERARD F. DUNN
645 MADISON AVENUE
11TH FLOOR
NEW YORK, NEW YORK 10022

PHONE: 212-644-9550 FACSIMILE: 212-644-9878

July 7, 1992

Mr. Al Davis
Larami Corporation
340 North 12th Street
Philadelphia, PA 19107

Dear Mr. Davis:

We are writting again to request that you return the four prototypes that Talk To Me Products had previously sent to you. These include, the battery operated air pump water gun, the manual air pump water gun, the non battery operated ratchet action pump water gun and the battery operated ratchet action pump water gun. We fully expect to receive these items in the condition that they were sent to you.

Please return these guns to Alan Amron, as expeditiously as possible, his address is 90 Rodeo Drive, Oyster Bay Cove, Syossett, New York, 11791.

Sincerely yours,

F. J. Penny Zahler
Paralegal

US005586688A

United States Patent [19]

Johnson et al.

[11] Patent Number: 5,586,688

[45] Date of Patent: Dec. 24, 1996

[54] ELECTRIC PUMP TOY WATER GUN

[75] Inventors: Lonnie G. Johnson, Smyrna; John Applewhite, Atlanta, both of Ga.

[73] Assignee: Johnson Research & Development Company, Inc., Smyrna, Ga.

[21] Appl. No.: 344,875

[22] Filed: Nov. 25, 1994

[51] Int. Cl.° A63H 3/18

[52] U.S. Cl. ..... 222/61; 200/82 R; 222/79; 222/175; 222/333; 222/396

[58] Field of Search ..... 222/61, 79, 175, 222/333, 396, 401; 446/405, 473; 200/82 R

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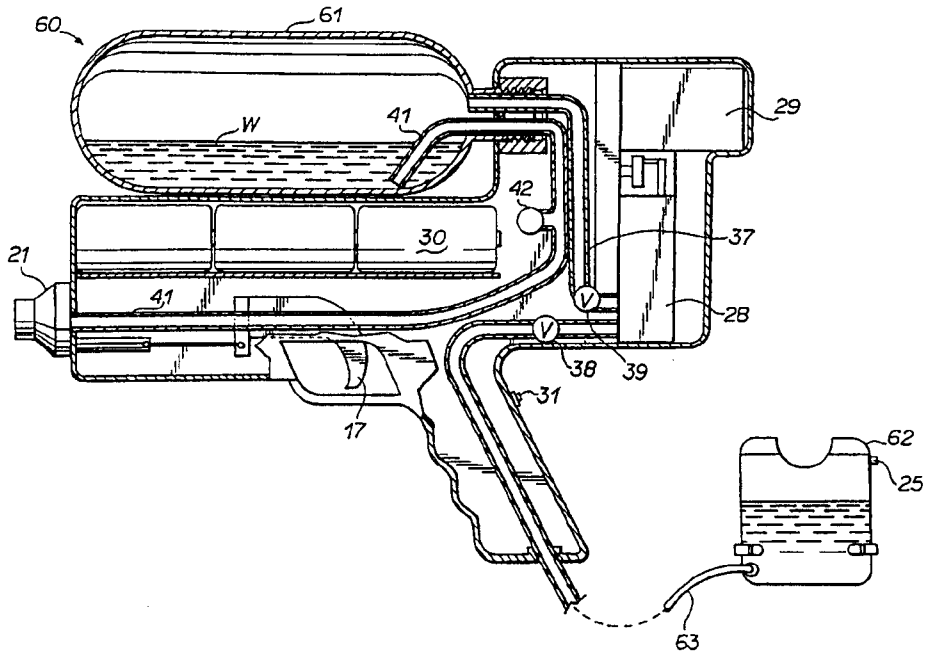
Primary Examiner—Joseph Kaufman
Attorney, Agent, or Firm—Kennedy & Kennedy

[57] ABSTRACT

A water gun **10** having a storage tank (**18**), a pressure tank (**19**) and an electric pump (**28**) for conveying liquid from the storage tank to the pressure tank. The conveyance of liquid into the pressure tank causes the liquid to be pressurized by air compressed within the pressure tank. A safety switch (**42**) limits the pressurization of the liquid. The pressurized liquid is released through a nozzle (**21**) coupled to the pressure tank.

13 Claims, 4 Drawing Sheets



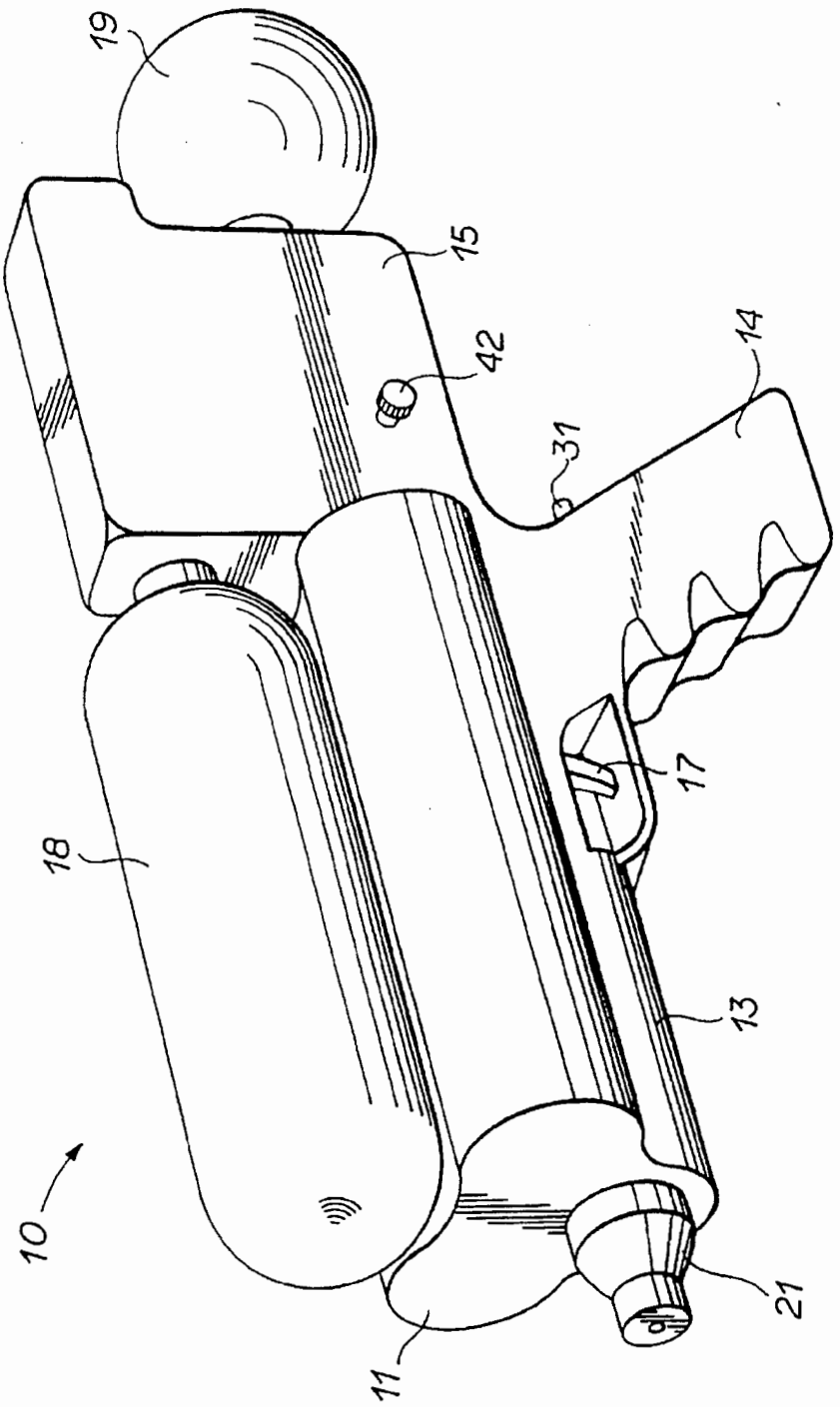


FIG 1

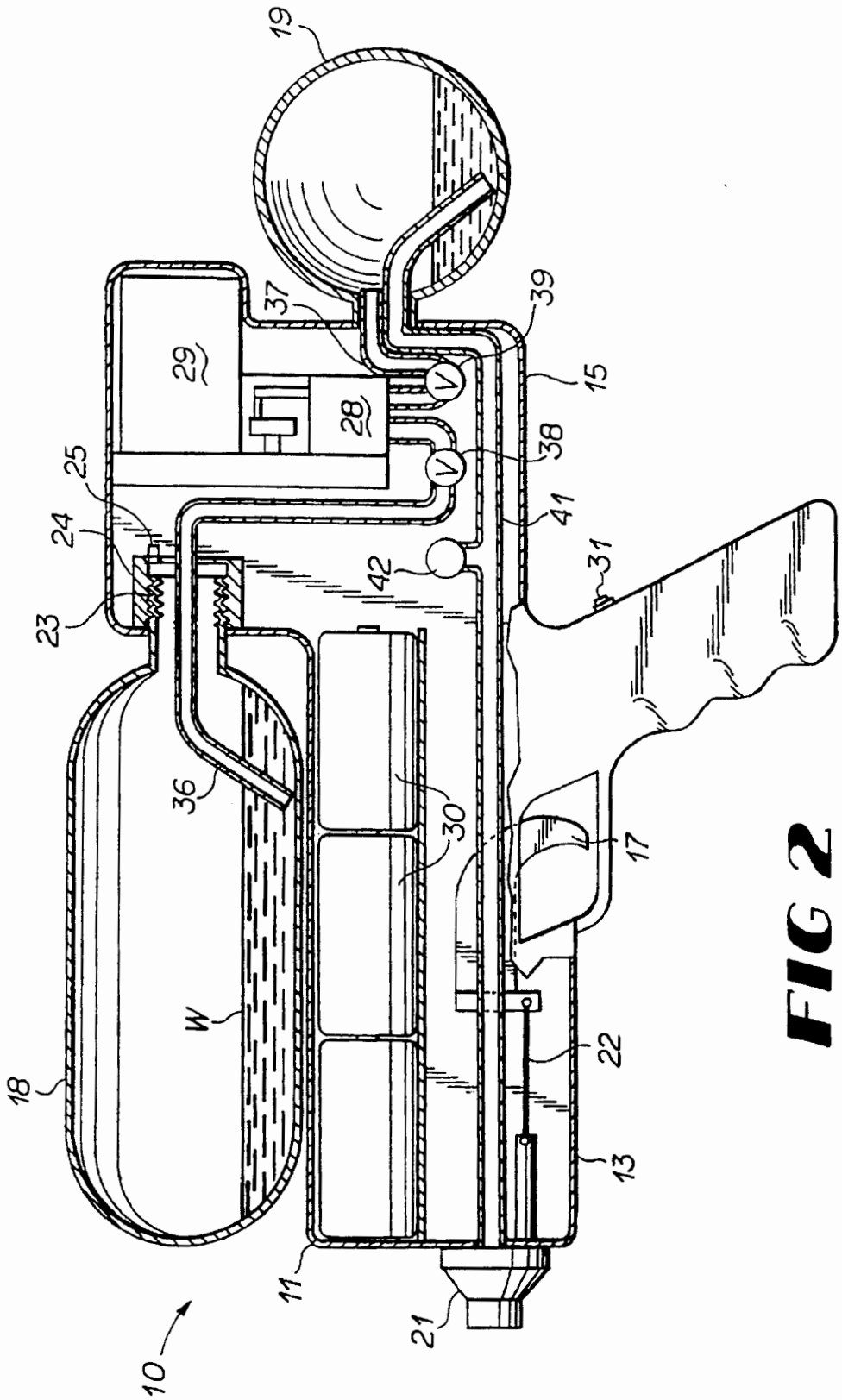


FIG 2

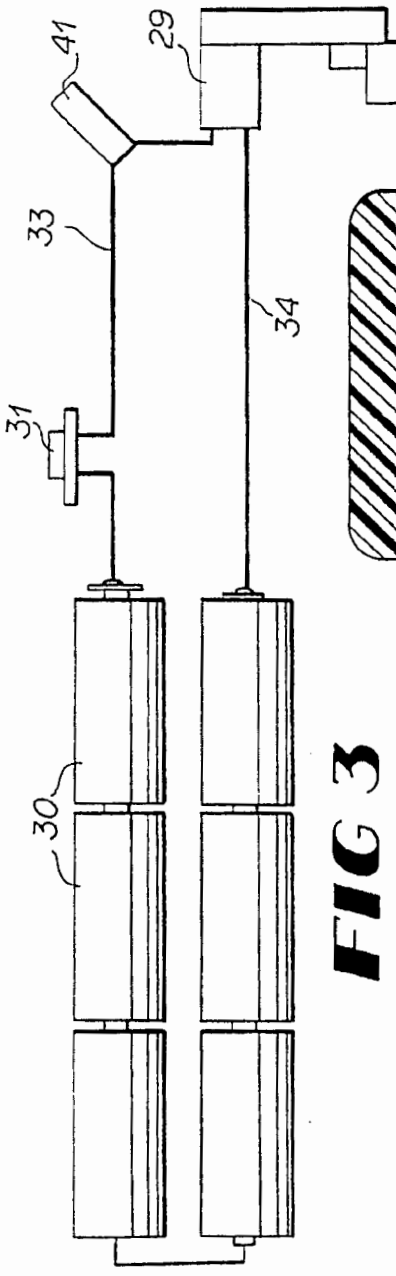


FIG 3

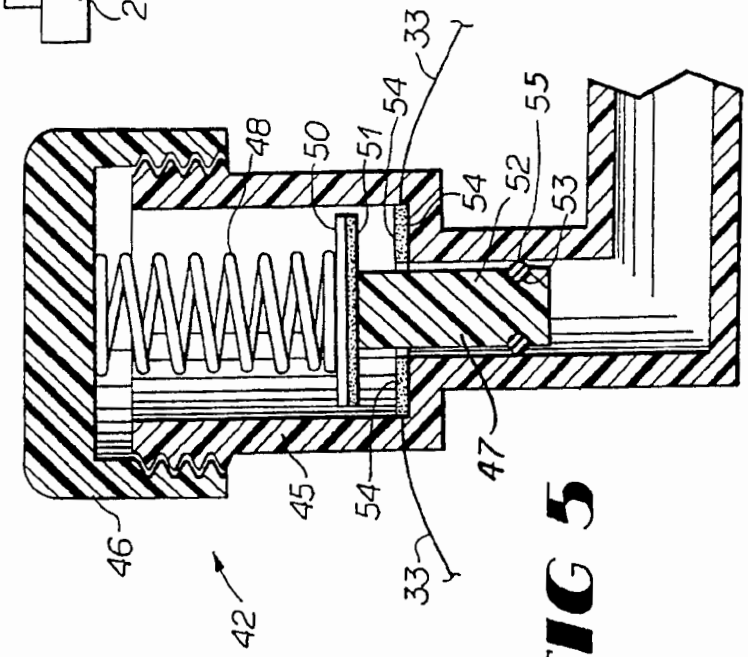


FIG 5

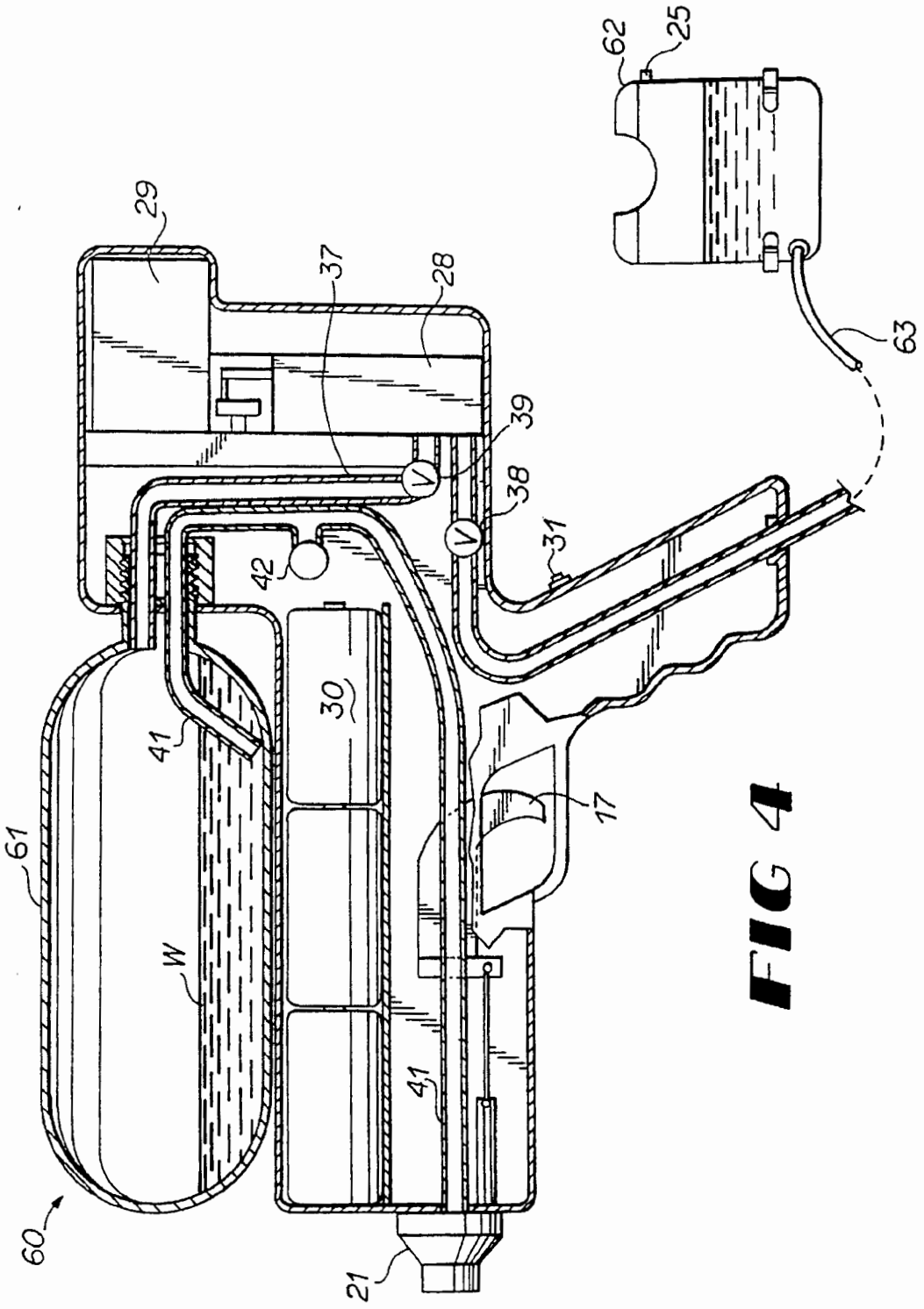


FIG 4

ELECTRIC PUMP TOY WATER GUN

TECHNICAL FIELD

This invention relates to toy water guns, and specifically to water guns having electrically motorized pumps.

BACKGROUND OF THE INVENTION

Water guns which eject a stream of water have been a very popular toy for children. These guns have been designed to eject the stream of water in a number of ways. The most common method of ejecting water has been by a manual pump coupled to the trigger of the gun. The pump is actuated by the mere pressure exerted by one finger of an operator upon the trigger, thus the pump typically cannot generate enough pressure to eject the water a lengthy distance. Additionally, these types of pumps work on the actuation of a compression piston which creates single, short bursts of water. However, many children desire the production of an extended stream of water.

water guns have also been designed with small electric pumps which expel a stream of water from a tube coupled to the pump, as shown in U.S. Pat. Nos. 4,706,848 and 4,743,030. However, these small electric pumps typically cannot eject the stream of water a lengthy distance.

Toy water guns have also been developed which eject a stream of water by exerting pressure on the water within the gun greater than that of ambience and controlling the release of water through a control valve. The water is expelled from the gun due to this pressure difference. The pressurization of the water has been achieved in a variety of manners. U.S. Pat. No. 3,197,070 illustrates a water gun wherein pressure is applied to the water by collapsing a water storage area. Similarly, U.S. Pat. No. 4,854,480 illustrates a water gun wherein water is forced into an elastic bladder which expands to maintain the water under pressure.

Lastly, water guns have been designed with manual pumps which force water or air from a storage reservoir to a pressure reservoir, as shown in U.S. Pat. No. 5,150,819 also jointly invented and owned by the present inventor. The conveyance of the water or air into the pressure tank compresses the air therein, thereby exerting pressure on the water within the storage tank. This type of water gun however is not easily operated by a small child without the strength or stamina to repetitively actuate the manual pumping.

Accordingly, it is seen that a need remains for a water gun which can generate a long, steady stream of water which can be easily operated by a small child. It is to the provision of such therefore that the present invention is primarily directed.

SUMMARY OF THE INVENTION

In a preferred form of the invention a water gun comprises a housing, a storage reservoir adapted to hold liquid and a pressure tank adapted to hold liquid. The water gun also has a pump for drawing liquid from the storage reservoir and depositing the drawn liquid into the pressure tank, an electric motor coupled to the pump, and an electric power supply electrically coupled to the electric motor. Conduit means are included for conveying liquid from the pressure tank to ambience and control means for controlling the flow of liquid therethrough.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a perspective view of a water gun embodying principles of the invention is a preferred form.

FIG. **2** is a cross-sectional view of the water gun of FIG. **1**.

FIG. **3** is a diagram of an electrical control circuit of the water gun of FIG. **1**.

FIG. **4** is a cross-sectional view of a water gun in another preferred form.

FIG. **5** is a cross-sectional view of a pressure safety switch of the water gun of FIG. **1**.

DETAILED DESCRIPTION

With reference next to the drawings, there is shown a water gun **10** having a housing **11** in the shape of a gun with a barrel **13**, a handle **14** and a stock **15**. The gun **10** has a trigger **17**, a removable liquid storage tank or reservoir **18** coupled to the stock **15**, a liquid pressure tank **19** coupled to the stock, and a conventional nozzle **21** mounted to the end of the barrel **13** and coupled to trigger **17** by linkage **22**. The storage tank **18** has a threaded neck **23** adapted to be threadably mounted within a threaded receptor **24** within the housing. The receptor **24** has a check valve or vent **25** in fluid communication with the storage tank **18**.

As shown in FIGS. **2** and **3**, the gun **10** has a liquid pump **28** driven by an electric motor **29** coupled to a series of batteries **30** by conductors **33** and **34** through an on/off switch **31**. As shown in FIG. **2**, a flexible intake tube **36** extends from the interior of the storage tank **18** to an inlet of pump **28**. A flexible outlet tube **37** extends from an outlet of pump **28** to the interior of the pressure tank **19**. Intake tube **36** is coupled to a check valve **38** which restricts the flow of liquid to storage tank **18**. Similarly, outlet tube **37** is coupled to a check valve **39** which restricts the flow of liquid to pump **28**. A flexible delivery tube **41** extends from the pressure tank **19** to nozzle **21**. A pressure sensitive safety switch **42** is coupled in fluid communication with the delivery tube **41** and electrically coupled to conductor **33** is series with electric motor **29** and on/off switch **31**.

As shown in FIG. **5**, the safety switch **42** has a cylindrical housing **45**, a cap **46** threadably mounted to the housing **45**, a plunger **47** movably mounted within the housing **45** and a spring **48** mounted between the plunger **47** and the cap **46**. The plunger **47** has a head portion **50** with an annular conductive bridge **51** and a stem portion **52** depending from the head portion. The stem portion **52** has an annular groove **53** having an O-ring **55** mounted therein which forms a seal between the stem portion **52** and the housing **45**. Conductor **33** is coupled to two conductive ends **54** which are mounted to opposite sides of the housing **45** adjacent and contactable with conductive bridge **51**.

An operator may set the pressure level at which the safety switch **42** is activated. As best understood by reference to FIG. **5**, the safety switch spring **48** biases plunger **47** in a direction to cause the conductive bridge **51** to contact the ends **54** of conductor **33** so as to close the conductive path therebetween and complete the circuit. As the safety switch is also coupled to delivery tube **41** the water pressure therein acts upon plunger stem portion **52** in a direction opposite to that of the biasing force of spring **48**. Thus, it should be understood that the threaded movement of the cap **46** upon housing **45** directly corresponds to the water pressure necessary to overcome the biasing force of the spring, i.e. the further the cap is threaded the further compressed the spring

48 becomes and thus the greater the water pressure must be to overcome the spring biasing force to move the plunger conductive bridge **51** out of contact with the conductor ends **54**. The threaded position of safety switch cap **46** thus limits the pressure of the water within the gun and thus the pressure of stream of water is emitted.

In use, the liquid storage tank **18** is removed from the stock **15** and filled with a liquid, hereinafter referred to as water W. The storage tank **18** is then threadably remounted to the stock with the intake tube **36** positioned through the neck **23** of the storage tank. The flexibility of the intake tube allows it to come to rest upon the interior floor of the storage tank.

The on-off switch **31** is then moved to its on position to energize the electric motor **29**. Activation of the motor drives liquid pump **28** which pumps water from the storage tank **18** to the pressure tank **19** through intake tube **36** and outlet tube **37**. Removal of water from the storage tank creates a vacuum within the storage tank which is equalized by air passing through check valve **25**. As water is deposited within the pressure tank it displaces a portion of the volume of air therein thus causing the remaining volume of air to be compressed. This compressed air pressurizes the water within pressure tank **19** and delivery tube **41**. The pressurized water and compressed air are prevented from escaping the pressure tank through outlet tube **37** by check valve **39**. The motorized pump **28** continues to deposit water within the pressure tank **19** until all water is removed from the storage tank or the water pressure reaches the preselected pressure level of the safety switch **42** to cause the opening of circuit and consequential deactivation of the motor. It should be understood that one may also deactivate the motor prior to the activation of the safety switch by simply moving the on/off switch **31** to its off position.

The trigger **17** is then manually pulled to actuate nozzle **21** to an open position whereby the pressurized water within the delivery tube **41** and pressure tank **19** is released as a stream therefrom. Release of the water decreases the water pressure within the pressure tank and delivery tube acting upon safety switch **42**. This decrease in pressure causes the plunger **47** to move conductive bridge **51** back into contact with conductor ends **54** so as to complete the circuit and enable the motor **29** to be reenergized. The energization of the motor causes additional water to be pumped from the storage tank **18** to the pressure tank **19** to once again pressurize a volume of water therein. It should also be understood that the water gun may emit a stream of water while simultaneously pumping water from the storage tank to the pressure tank.

With reference next to FIG. **4**, a water gun **60** in another preferred form is shown. Here, the water gun **60** is substantially the same as that described in FIGS. **1** and **2** except that the pressure tank **61** is positioned in the location of the storage tank **18** in the previous embodiment and the storage tank **62** is located remotely from the housing of the water gun. The storage tank is coupled to the water gun by an elongated intake tube **63** through which water is conveyed to the pump **28**. The remote location of the storage tank substantially lessens the weight of the liquid filled water gun and allows for a greater liquid capacity. The storage tank **62** is shaped as a vest to be worn about the torso of a user.

It thus is seen that a toy water gun in now provided which may be used by a small child without the strength or stamina to operate toy water guns having manual pumps.

While this invention has been described in detail with particular references to the preferred embodiments thereof,

it should be understood that many modifications, additions and deletions, in addition to those expressly recited, may be made thereto without departure from the spirit and scope of the invention as set forth in the following claims.

We claim:

1. A portable water gun comprising a housing defining a barrel, a handle and a trigger; a storage reservoir adapted to hold liquid; a pressure tank adapted to hold liquid; a pump for drawing liquid from said storage reservoir and depositing the drawn liquid into said pressure tank; an electric motor coupled with said pump, an electric power supply electrically coupled with said electric motor; conduit means for conveying liquid from said pressure tank to ambience adjacent an end of said barrel; and control means coupled to said trigger for controlling the flow of liquid through said conduit means upon actuation of said trigger.

2. The portable water gun of claim **1** further comprising limiting means for limiting pressure within said pressure tank.

3. The portable water gun of claim **2** wherein said limiting means comprises a pressure sensitive electric switch coupled to said electric motor.

4. The portable water gun of claim **3** wherein said pressure sensitive electric switch is adjustable to vary the pressure at which the switch is actuated.

5. The portable water gun of claim **4** wherein said pressure sensitive electric switch comprises a switch housing, a cap threadably mounted to said switch housing, a movable member movably mounted within said housing, said movable member having a conductive bridge, an electric conductor coupled to said electric motor having ends mounted to said switch housing spatially from each other and contactable with said conductive bridge, a spring mounted between said cap and said movable member for biasing said movable member toward a position wherein said conductive bridge contacts said conductor ends, and second conduit means in fluid communication with said pressure tank so that fluid pressure within said pressure tank forces said movable member in a direction opposite to the direction of force of the spring and whereby the threaded position of the cap varies the compression of the spring to vary the fluid pressure necessary to overcome the spring force to move the conductive bridge from contact with the conductor ends.

6. The portable water gun of claim **1** wherein said storage reservoir comprises a flexible container sized and shaped to be worn as a vest and an elongated tube extending from said container to said housing.

7. The portable water gun of claim **1** further comprising a check valve for preventing water within said pressure tank from returning to said storage reservoir.

8. A portable water gun comprising

a housing defining a barrel and a handle;

a trigger;

a liquid storage reservoir;

a liquid pressure tank;

an electrically motorized pump;

an electric power source coupled to said electrically motorized pump;

first conduit means for conveying liquid contained within said storage reservoir to said electrically actuated pump;

second conduit means for conveying liquid from said electrically actuated pump to said pressure tank;

third conduit means for conveying liquid from said pressure tank to ambience; and

control means coupled to said trigger for controlling the flow of liquid through said third conduit means upon actuation of said trigger,

whereby liquid within the storage reservoir is pumped into the pressure tank through the first and second conduits thereby compressing air within the pressure tank so as to pressurize liquid therein which is controllably released from the pressure tank through the third conduit means by actuation of the trigger controlled control means.

9. The portable water gun of claim **8** further comprising a limiting means for limiting pressure within said pressure tank.

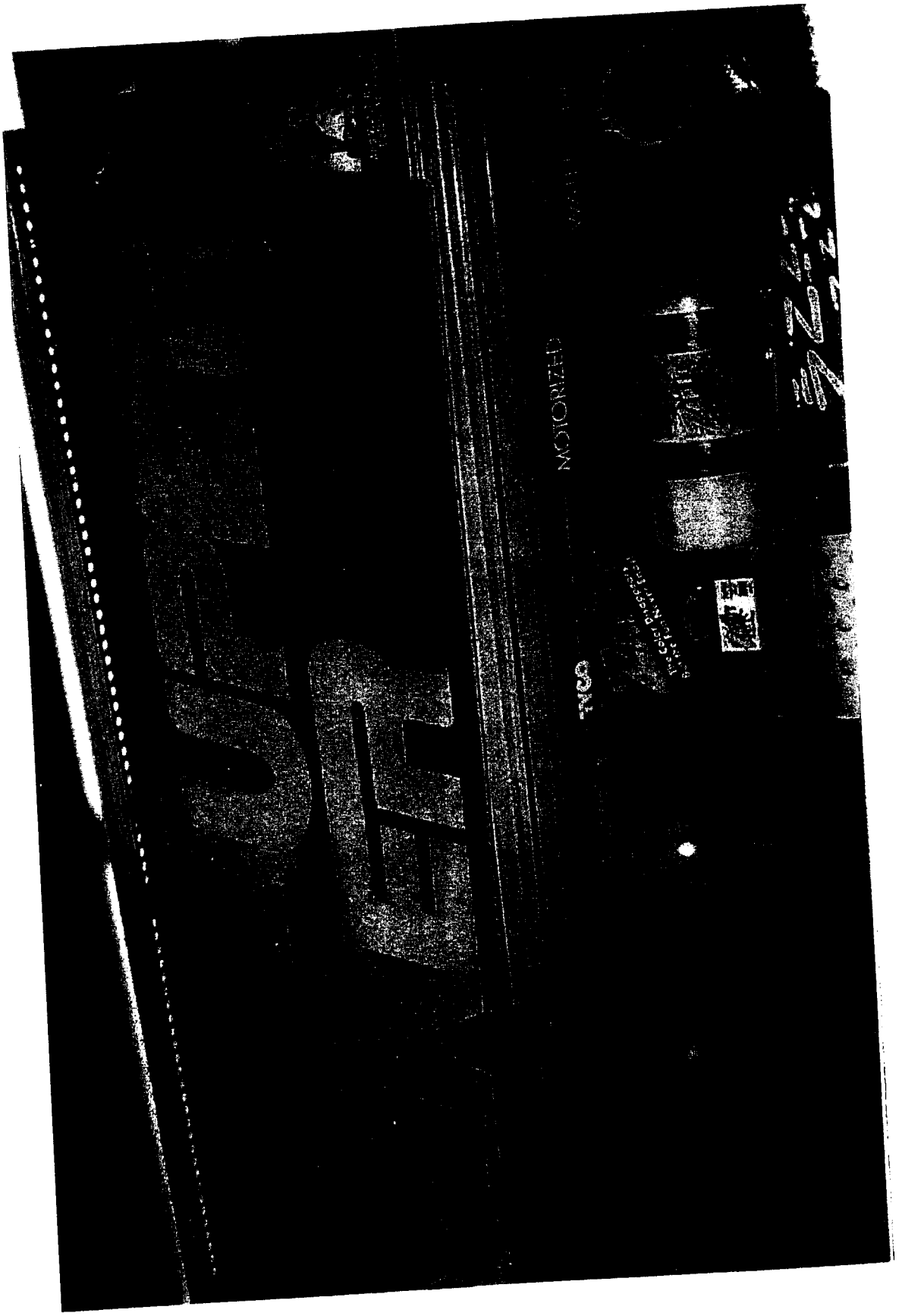
10. The portable water gun of claim **9** wherein said limiting means comprises a pressure sensitive electric switch coupled to said electric motor.

11. The portable water gun of claim **10** wherein said pressure sensitive electric switch is adjustable to vary the pressure at which the switch is actuated.

12. The portable water gun of claim **11** wherein said pressure sensitive electric switch comprises a switch housing, a cap threadably mounted to said switch housing, a movable member movably mounted within said housing, said movable member having a conductive bridge, an electric conductor coupled to said electric motor having ends mounted to said switch housing spatially from each other and contactable with said conductive bridge, a spring mounted between said cap and said movable member for biasing said movable member toward a position wherein said conductive bridge contacts said conductor ends, fourth conduit means in fluid communication with said pressure tank so that fluid pressure within said pressure tank forces said movable member in a direction opposite to the direction of force of the spring and whereby the threaded position of the cap varies the compression of the spring to vary the fluid pressure necessary to overcome the spring force to move the conductive bridge from contact with the conductor ends.

13. The portable water gun of claim **8** further comprising a check valve for preventing water within said pressure tank from returning to said storage reservoir.

* * * * *


MOTOROLA

Law Offices of
GERARD F. DUNNE
645 MADISON AVENUE
11TH FLOOR
NEW YORK, NEW YORK 10022

E: 212-644-9550

FACSIMILE: 212-644-9878

June 15, 1992

Mr. Al Davis
Larami Corporation
340 North 12th Street
Philadelphia, PA 19107

Dear Al:

We have received information about Larami Corporation has been distributing materials used for point-of-sale of the Super Soaker product which indicates Super Soaker has been registered as a trademark with The United States Patent and Trademark Office.

The trademark Super Soaker has not been registered, and the use of the registration symbol of the ® prior to any registration of the mark Super Soaker by Larami Corporation is a false designation of origin and must cease immediately.

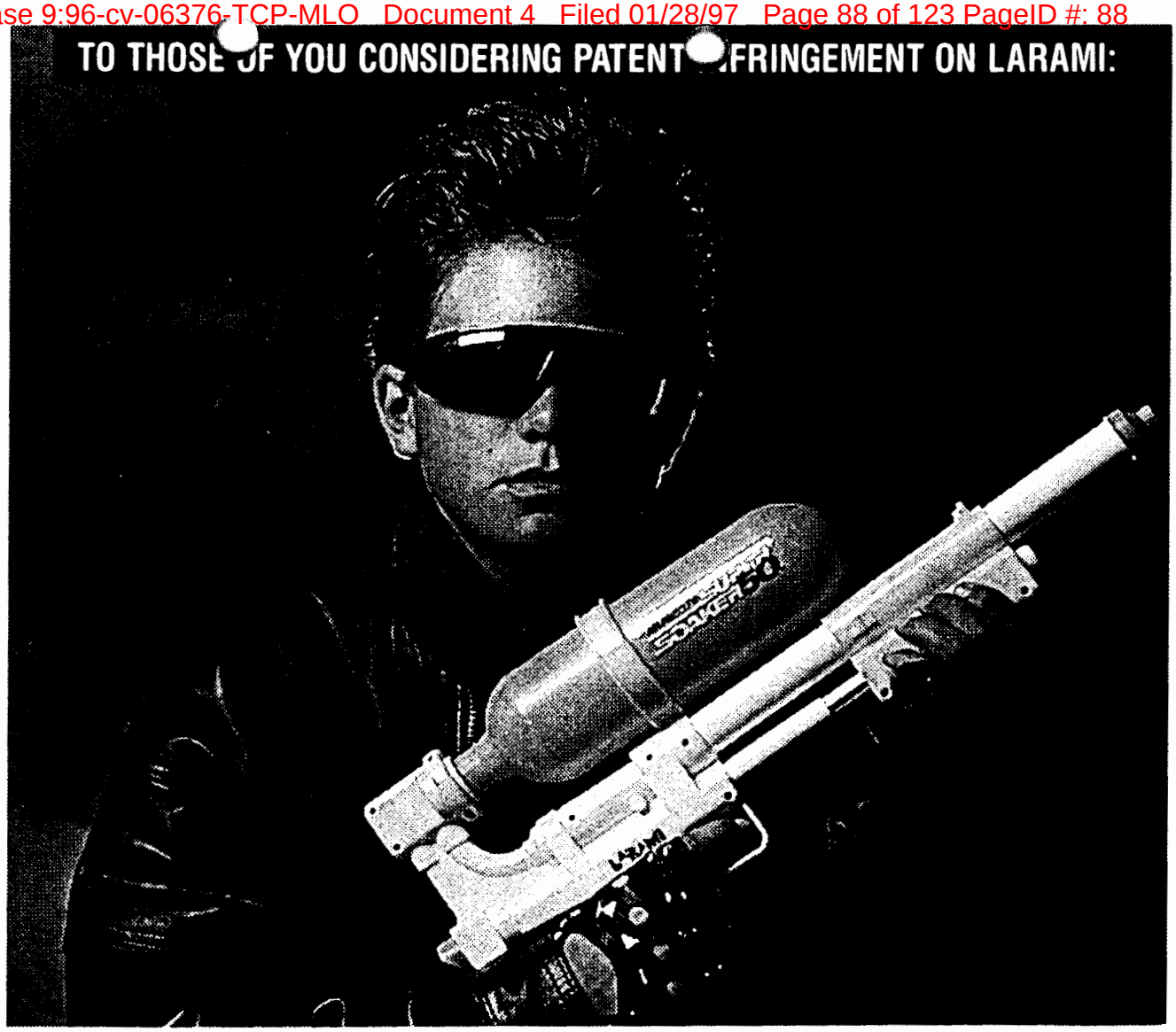
Sincerely yours,

Gerard F. Dunne

GFD:cf

OCTOBER 1993 — PLAYTHINGS

PHILADELPHIA, PA — Larami Corporation, manufacturer of the Super Soaker water toy, has announced that the United States Trademark Office recently granted Larami a trademark registration.



YOU'LL GET SOAKED.

Don't try it. Larami has applications for patents (in both the United States and foreign countries) on our air pressure water gun, the Super Soaker, including one for design. The Super Soaker name and the product design are registered trademarks, and Larami will enforce every patent and trademark infringement case to the letter of the law.

So if you're thinking of producing a knock-off, don't. We've got you covered. Larami, 340 N. 12th Street, Philadelphia, PA 19107.

LARAMI

(Circle No. 10 on Reader Inquiry Card)

What's Selling

Los Angeles

Non-water summer toys heat up

Joanne Gamlin

The sun trained its rays on summer toys in May, but turned them down on toys that require water.

In a parched part of the country where water rationing and recycling are a fact of daily life, "I'm reluctant to promote water toys," acknowledged spokesman for a member of a San Diego-based chain. As a result, he said his chain is going easy on ordering such sun season staples as pools, beach toys, water pistols and slide games like Marchon's Crocodile Mile.

However, sales of non-water, outdoor toys, such as Little Tikes' activity gyms, retailing at $79.99 in the small size and at $189.99 in the large size, were solid, said the spokesman. Ditto, he added, for Little Tikes' treehouse and its Cozy Coupe at $48.99.

The sun aimed its rays as well at other outdoor toys. TOI's Blastos, a projectile toy that shoots bubbles, was described as hot by a Downey independent and by the manager of a West Los Angeles toy store, part of a five-unit chain. A second strong outdoor toy, noted the store manager, was the Grip Ball from Mantae, also tagged at just under $20. Finally, these retailers indicated they harbored few doubts about selling water toys, above all, the water pistol. "We're selling a lot of them, mostly by Larami, that retail from $1.99 to $22.99," said the store manager.

Sports-related toys scored big in a gigantic South Bay mall where two toy stores highlighted Ohio Art's Play-Off basketball hoop in their windows. At another big store, shoppers picked out Empire Toy's colorful bowling set and Multi Toy's preschool Catch It baseball glove, both at $4.99.

Other toys hauled away by parents at the toy super store on a lazy May afternoon: Mattel's Barbie Camping Playset at $16.99, Ohio Art's Etch a Sketch at $18.99 and V-Tech's Little Talking World Fire Rescue station at $19.99. Grooming aids for small girls were popular too. Selected for purchase were Tinkerbell's Nail Glitter peel-off polish at $3.99 and Gitano's over-the-shoulder handbag at $7.99.

At the same time, Playmates' Ninja Turtles were plainly on the minds of other shoppers as a small boy induced his mother to purchase the sewer-swimming Donatello at $4.99 and a teenager proudly strode off with the Turtle Technodrome at $49.99.

The new Ninja Turtle movie has worked its magic on Playmates' action figures, two other retailers said. "We're getting a lot of demand for April, the young human female in the film," noted a spokeswoman for the Downey independent.

Other dolls to attract customer action, she continued: Mattel's Bathtime Fun Barbie, its Babysitter Skipper and its Wedding Fantasy Barbie, all retailing up to $29.99. Still, Applause's Little Mermaid doll at $16.99 was a vigorous competitor, she added. To mark Mother's Day, moreover, a supermarket chain debuted 14-inch porcelain dolls at $19.99 from Heritage Mint, Ltd.

Video was certainly not left out of the picture. Not with two retailers underscoring the high demand for Walt Disney's The Jungle Book VHS cassette at $24.99. And while conceding that Nintendo has slowed down a bit, the San Diego retailer said that its $99.99 Action Set remained strong. As for software, he said that kids like the Arcade version of the Ninja Turtle story and adults go for Vegas Dream, both retailing at $49.99. Atari's Lynx supplied the action, however, at the five-unit chain.

Yet other toys to be mentioned by these retailers, who generally agreed that store sales were about average, included the entire Creativity for Kids line, Tonka's cement mixer at $30 and Milton Bradley's Jenga game. Both Little Tikes and Fisher-Price got advertising ink from a national discount chain which promoted the Little Tikes playhouse at $139.99 and F-P's tough trike at $19.99.

Hobbies: War planes roar

Perhaps because of parades toasting returning troops, Desert Storm fighter plane models continued to be a sales triumph, even in May. A 43-year-old Santa Monica hobby store, for example, reported lively demand for Monogram's F-14, F-15, F-16, F-18 and A-10 (the tank killer) model kits, retailing at $8.

Turning to R/C, the store owner described rising sales of aircraft models from such manufacturers as Top Flight, SIG and Royal, retailing up to $1,000.

At a newer Santa Monica hobby store, one which specializes in R/C helicopters, measuring up to six feet, sales were buoyant in models from Kyosho and Miniature Aircraft. A spokesperson said customers spend up to $800 on these realistic models.

IN T

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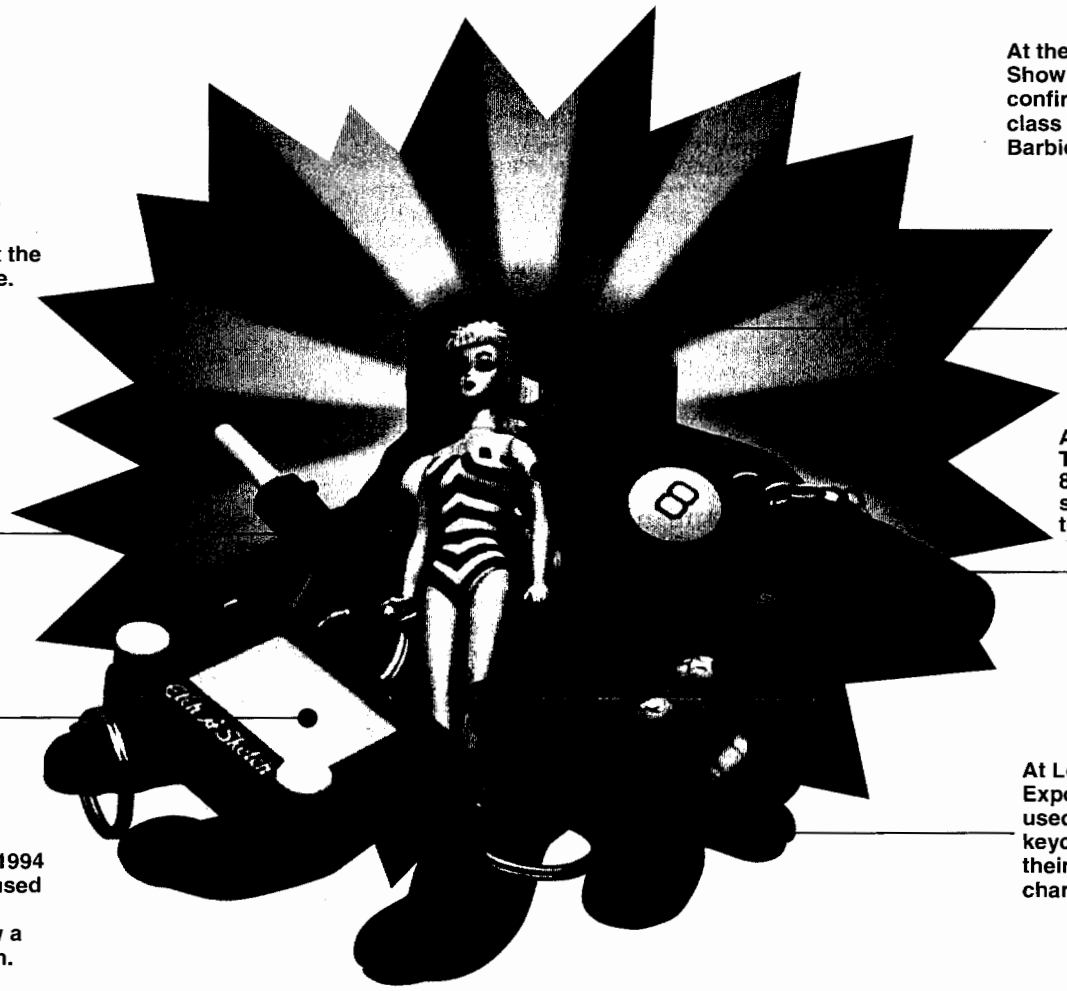

At Toy Fair 1992, Larami gave away Super Soaker keychains to whet the industry's appetite.

At the mid-year Toy Show in 1995, Mattel confirmed they were a class act with a Classic Barbie keychain.

At Toy Fair 1994, Tyco used Magic 8-Ball keychains to show their buyers the future.

At Toy Fair 1993, 1994 & 1995, Ohio Art used Etch-A-Sketch keychains to draw a lasting impression.

At London Licensing Expo 1995, New Line used The Mask keychain to introduce their SSSMOKIN' new character property.

IN THE PALM OF YOUR HAND.

Barbie KEYCHAINS · Contemporary Barbie Key Chains · Lara Lee KEYCHAIN · Cracker Jack KEYCHAIN · Magna Doodle KEYCHAIN · Wooly Willy KEYCHAIN · Etch A Sketch Magic Screen KEYCHAIN

Super Soaker KEYCHAIN · MASK KEYCHAIN · Silly Putty KEYCHAIN · TETRIS FINGER DOODLE · Yikka Yakker KEYCHAIN · OBIE · Pocket TIC TAC TOE Keychain · 8 BALL KEYCHAIN

Individually, our products are executed so well, our licensors have used them to make impressions on *their* customers. Together, our line of licensed miniatures on keychains, pendants, pencil toppers and watches represent the greatest mix of classic and contemporary toys ever assembled.

We offer impulse retail price points, coordinated package sizes and merchandising displays designed for impact.

So give us a call or contact your Basic Fun sales representative - at retail, our line of unique, functioning, licensed products *Really Works!*

BASIC FUN INC.

Basic Fun, Inc.
P.O. Box 847
Huntingdon Valley, PA 19006
800-662-3380 • 215-364-1665
Fax 215-364-9676

Alan Amron
P.O. Box 42 Woodbury, New York 11797

June 27, 1996

Larami Limited, A Division of Hasbro Toy
303 Fellowship Road
Mt. Laurel, New Jersey 08054

Dear Sirs;

This letter is to inform you to cease and desist your continual misuse of the Trademark Registration on the "Super Soaker" name.

The enclosed ad ran in this months issue of The Toy Book magazine. When I called to speak with someone at Basic Fun about this, your named licensed manufacturer of the "Super Soaker " water gun key chains, they informed me to contact the people at Larami Limited/Hasbro Toys directly because they supplied the artwork for Basic Funs ad.

So I am putting you on notice, again!

Yours truly,

Alan Amron
AA/lmk

Enc.

cc: Paul Eisenstein, Esq.

IN T

Officially Licensed CLASSIC Barbie™ KEYCHAINS

SUPER SOAKER KEYCHAIN

FROM ZERO T
ACTION KEYC

Individually, our p
well, our licensors ha

WE PUT THE WORLD'S GREATEST TOYS

and Tiniest!

At the mid-year Toy Show in 1995, Mattel confirmed they were a class act with a Classic Barbie keychain.

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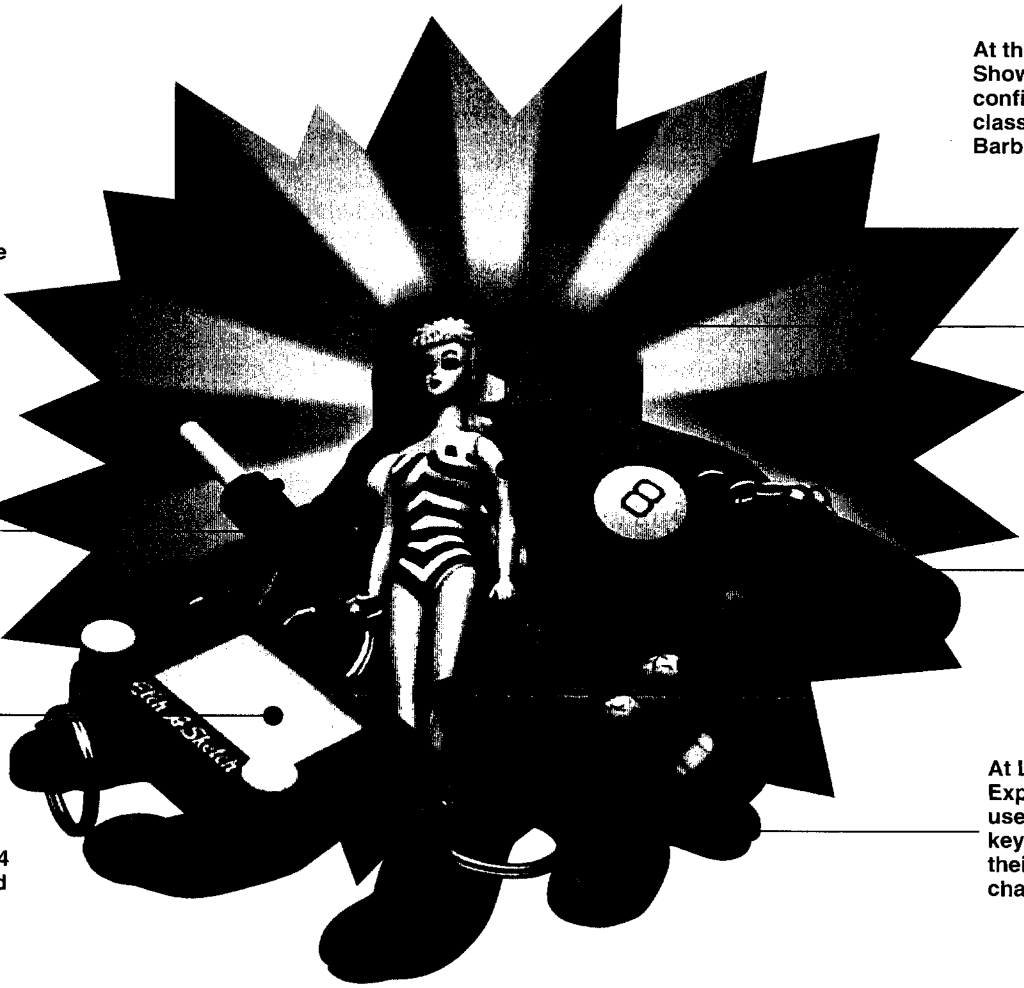

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IN THE PALM OF YOUR HAND.

Classic Barbie Keychains · Contemporary Barbie Key Chains · Lava Lite Lamp Keychain · Cracker Jack Keychain · Magna Doodle Keychain · Wooly Willy Keychain · Etch A Sketch Magic Screen Keychain · Super Soaker Keychain · Mask Action Keychain · Silly Putty Keychain · Tetris Finger Doodle · Yikka Yakker Keychain · Obie · Pocket Tic Tac Toe Keychain · Magic 8 Ball Keychain

Individually, our products are executed so well, our licensors have used them to make impressions on *their* customers. Together, our line of licensed miniatures on keychains, pendants, pencil toppers and watches represent the greatest mix of classic and contemporary toys ever assembled.

We offer impulse retail price points, coordinated package sizes and merchandising displays designed for impact.

So give us a call or contact your Basic Fun sales representative - at retail, our line of unique, functioning, licensed products *Really Works!*

BASIC FUN INC.

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Alan B. Amron
77 Horton Place
Syosset, NY 11791

REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. 90/004,470

PATENT NO. D,318,309

ART UNIT 2902

Enclosed is a copy of the latest communication from the Patent and Trademark Office in the above identified reexamination proceeding. 37 C.F.R. 1.550(e).

Where this copy is supplied after the reply by requester, 37 C.F.R. 1.535, or the time for filing a reply has passed, no submissions on behalf of the reexamination requester will be acknowledged or considered. 37 C.F.R. 1.550(e).

Patent and Trademark Office
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

CONTROL NUMBER	FILING DATE	PATENT UNDER REEXAMINATION	ATTORNEY DOCKET NO.
90/004,470	11/17/96	D318309	

EXAMINER

A1M1/0116

RONALD PANITCH
PANITCH SCHWARZE JACOBS & NADEL
LARAMI INC HASBRO ' AR CREATION
1601 MARKET STREET 34TH FLOOR
PHILADELPHIA PA 19103

ART UNIT	PAPER NUMBER
PARRAL	

DATE MAILED:

ORDER GRANTING/DENYING REQUEST FOR REEXAMINATION

The request for reexamination has been considered. Identification of the claims, the references relied on, and the rationale supporting the determination are attached.

Attachment(s): ☐ PTO-892, ☐ PTO-1449, ☐ Other: _____.

1. ☑ The request for reexamination is GRANTED.

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Statement (optional): TWO MONTHS from the mailing date hereof. 37 CFR 1.530(b). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).**

For Requester's reply (optional): TWO MONTHS from the date of service of any patent owner's statement. 37 CFR 1.535. **NO EXTENSION OF TIME IS PERMITTED.** If patent owner does not file a timely statement under 37 C.F.R. 1.530(b), no reply by requester is permitted.

2. ☐ The request for reexamination is DENIED.

This decision is not appealable. 35 U.S.C. 303(c). Requester may seek review by petition to the Commissioner within ONE MONTH from the mailing date hereof. 37 CFR 1.515(c). EXTENSIONS OF TIME ONLY UNDER 37 CFR 1.183.

In due course, a refund under 37 CFR 1.26(c) will be made to requester (listed below if not patent owner) ☐ by Treasury check, ☐ by credit to Deposit Account No. _____ unless notified otherwise. 35 U.S.C. 303(c).

(Third party requester's correspondence address)

DECISION

1. **A substantial new question of patentability affecting the claim of United States Patent Number D 318,309 to Bruce M. D'Andrade is raised by the request.**

2. The request asserts that the claim of D'Andrade is fully anticipated by the prior art publication shown in exhibits 1-3 of the supplemental Affidavit of 12/3/1996.

3. It is agreed that consideration of exhibits 1-3 of the supplemental Affidavit of 12/3/1996 raise a substantial new question of patentability as to the claim of D'Andrade. These documents are clearly material to the examination of the claim as pointed out in the request.

4. The documents in exhibits 1-5 of the Affidavit of 11/27/1996 do not meet the basic requirements of an effective prior art publication against the claim since the date of the publication was not given.

5. The documents in exhibits 6-8 of the Affidavit of 11/27/1996 and exhibit 1 of the Affidavit of 12/12/1996 will not be considered since reexamination is concerned only with prior art documents.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raphael Barkai, whose telephone number is (703)-305-3123. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ted Shooman, can be reached at (703)-305-3170. The FAX phone number for this group is (703)-308-2742 Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)-305-3293.

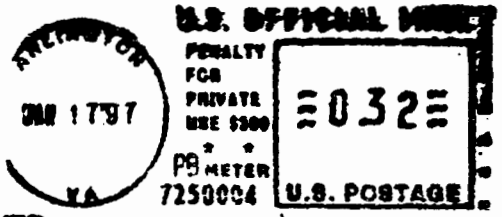
RB
R.B. January 16, 1997

RAPHAEL BARKAI
PATENT EXAMINER
GROUP 2900

Organization_____Bldg./Room_____
U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
IF UNDELIVERABLE RETURN IN TEN DAYS

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

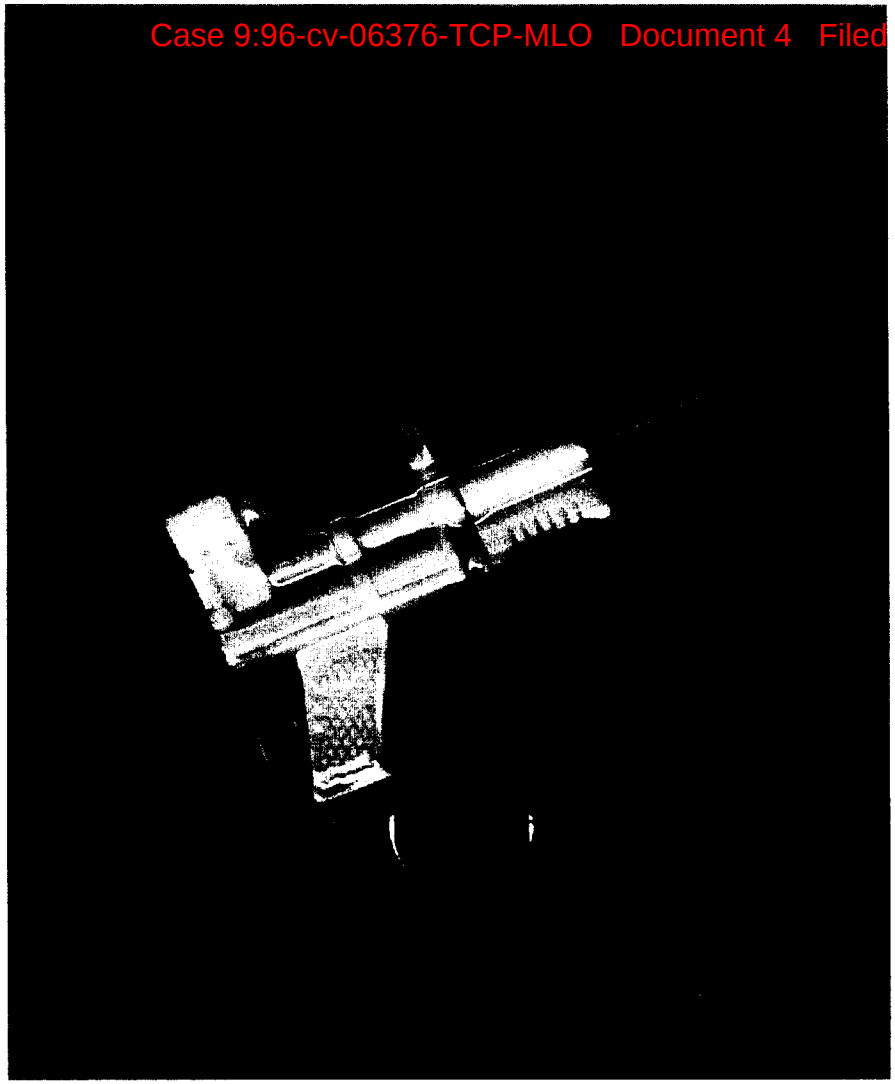
AN EQUAL OPPORTUNITY EMPLOYER

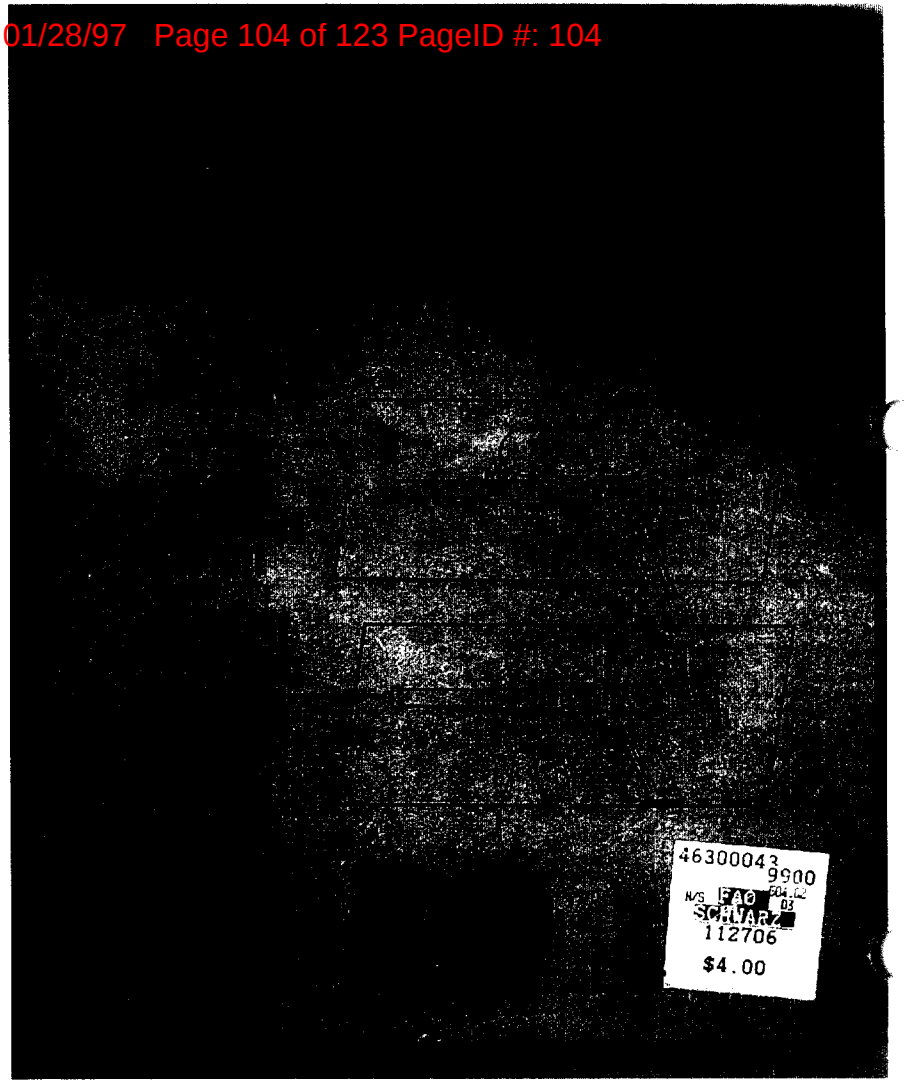


42

11791-2617 12

Imprinted on the product in 1991
U.S. Patent D318,309

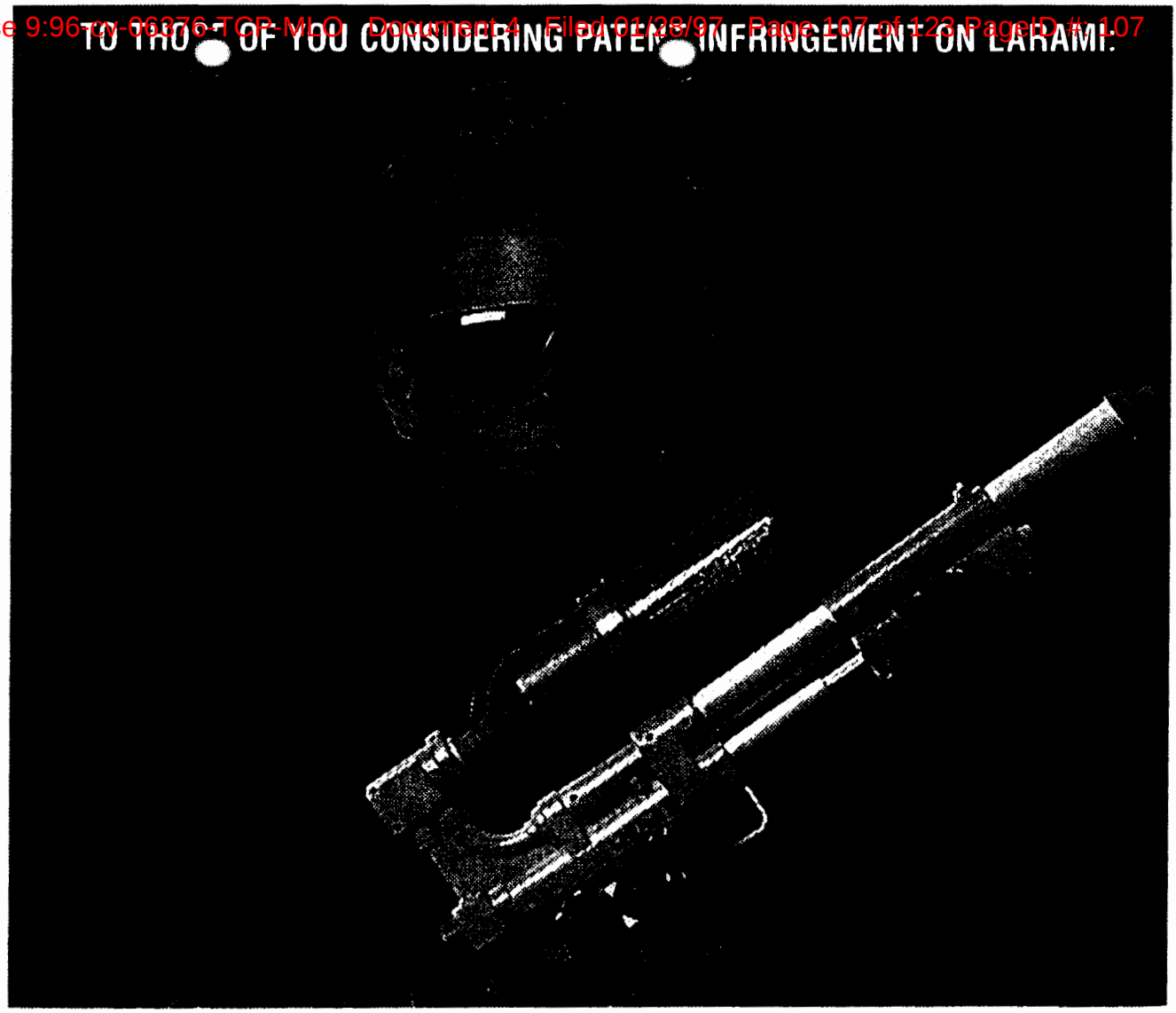




FRONT BACK

This Exhibit proves that
Larami's secondary licensing market is based on the image of a water gun,
which is indicated on the package referring to the United States Patent #D318,309.

The licensed product above is that of an image of a water gun.



YOU'LL GET SOAKED.

Don't try it. Larami has applications for patents (in both the United States and foreign countries) on our air pressure water gun, the Super Soaker, including one for design. The Super Soaker name and the product design are registered trademarks, and Larami will enforce every patent and trademark infringement case to the letter of the law.

So if you're thinking of producing a knock-off, don't. We've got you covered. Larami, 340 N. 12th Street, Philadelphia, PA 19107.

LARAMI

(Circle No. 10 on Reader Inquiry Card)

Late Reports

Larami gains trademark for Super Soaker shape

PHILADELPHIA, PA. — Larami Corporation, manufacturer of the Super Soaker water toy, has announced that the United States Trademark Office recently granted Larami a trademark registration.

The trademark registration pertained to the shape of the company's popular Super Soaker gun.

In awarding the registration, the Trademark Office recognized that the shape of the Super Soaker gun was uniquely identified with Larami, the company said.

In a recent statement, Larami explained that it is recording its trademark with U.S. Customs to put a stop to the increasing number of Super Soaker look-alikes that are presently entering the United States from countries overseas.

The trademark will protect Larami's Super Soaker design against products in all sizes.

United States Patent [19]

D'Andrade

[11] **Patent Number: Des. 318,309**

[45] **Date of Patent: ** Jul. 16, 1991**

[54] **TOY WATER GUN WITH TANK**

[76] Inventor: **Bruce M. D'Andrade**, 3 Ten Eyck Rd., Whitehouse Station, N.J. 08889

[**] Term: **14 Years**

[21] Appl. No.: **530,980**

[22] Filed: **May 31, 1990**

[52] U.S. Cl. **D21/147**

[58] Field of Search 446/473, 180, 181; 42/54, 58; D21/145-147, 59; D23/225

[56] **References Cited**

U.S. PATENT DOCUMENTS

D. 73,206	4/1929	Hermann	D23/225
D. 191,686	10/1961	Johnson et al.	D21/147
D. 200,473	3/1965	Sawyer	D23/225
D. 297,748	9/1988	Marino	D21/147
D. 303,820	10/1989	Wong	D21/147
3,273,553	9/1966	Doyle	446/473

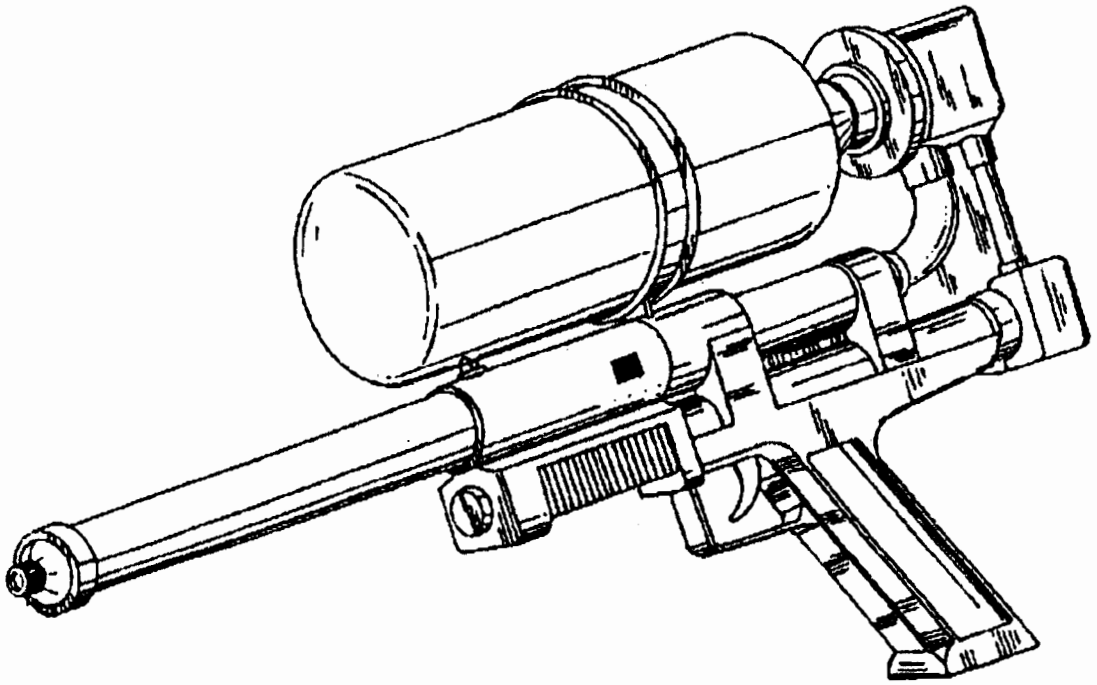
Primary Examiner—Charles A. Rademaker
Attorney, Agent, or Firm—Kenneth P. Glynn, Eric A. LaMorte

[57] **CLAIM**

The ornamental design for a toy water gun with tank, as shown.

DESCRIPTION

FIG. 1 is a perspective of a toy water gun with tank showing my new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a left side elevational view thereof;
FIG. 5 is a right side elevational view thereof;
FIG. 6 is a top plan view thereof; and
FIG. 7 is a bottom plan view thereof.



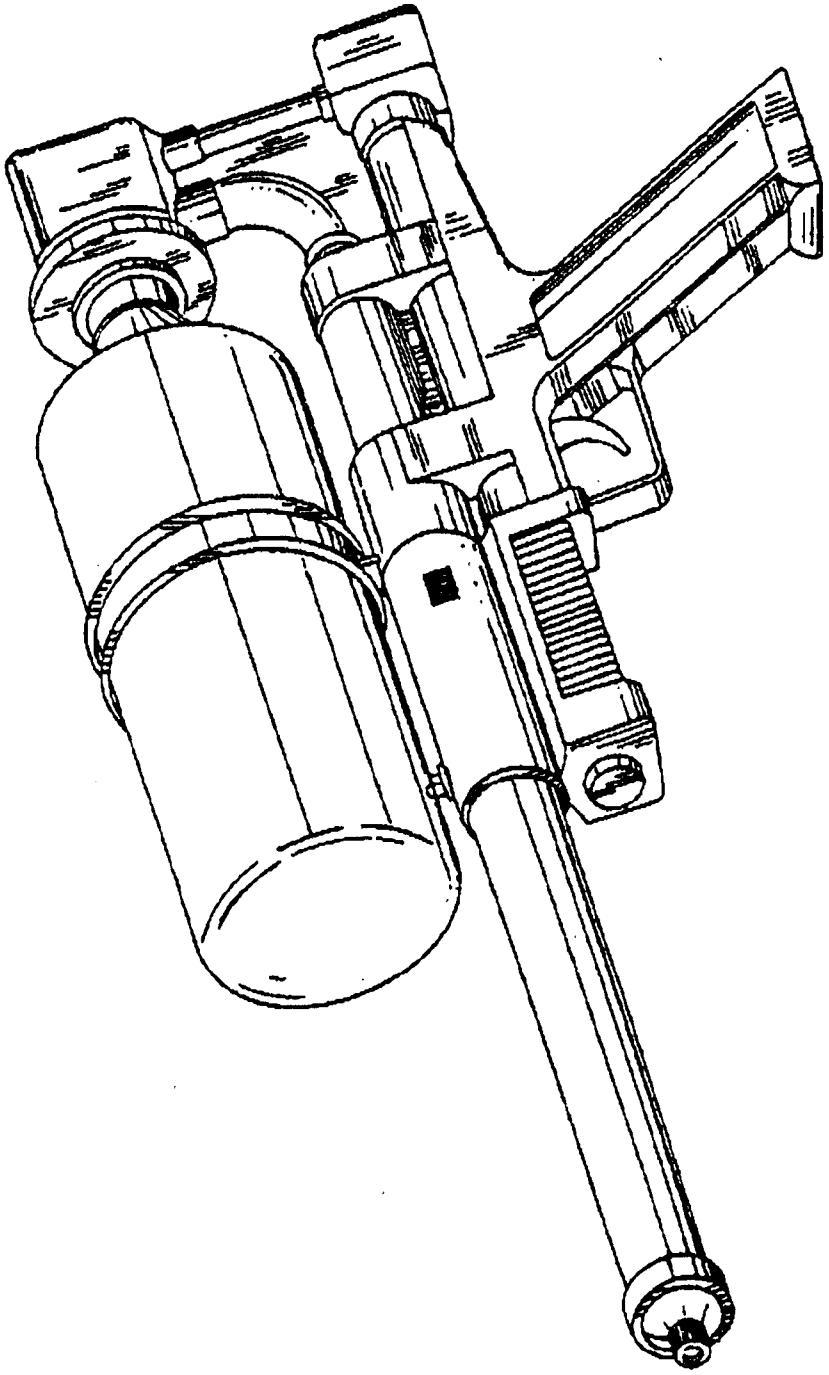


FIG. 1

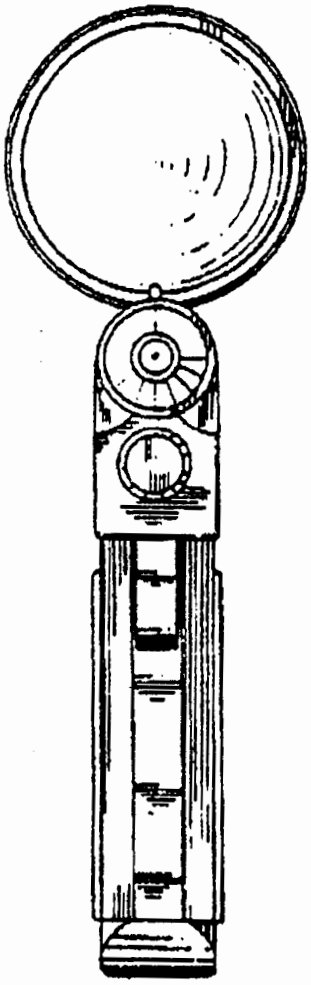


FIG. 2

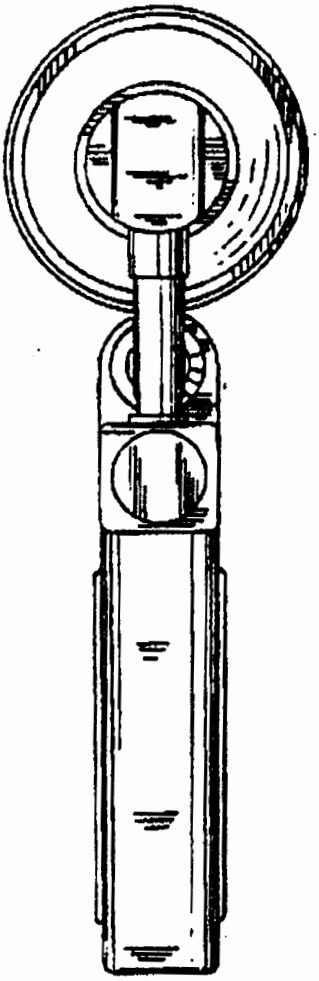


FIG. 3

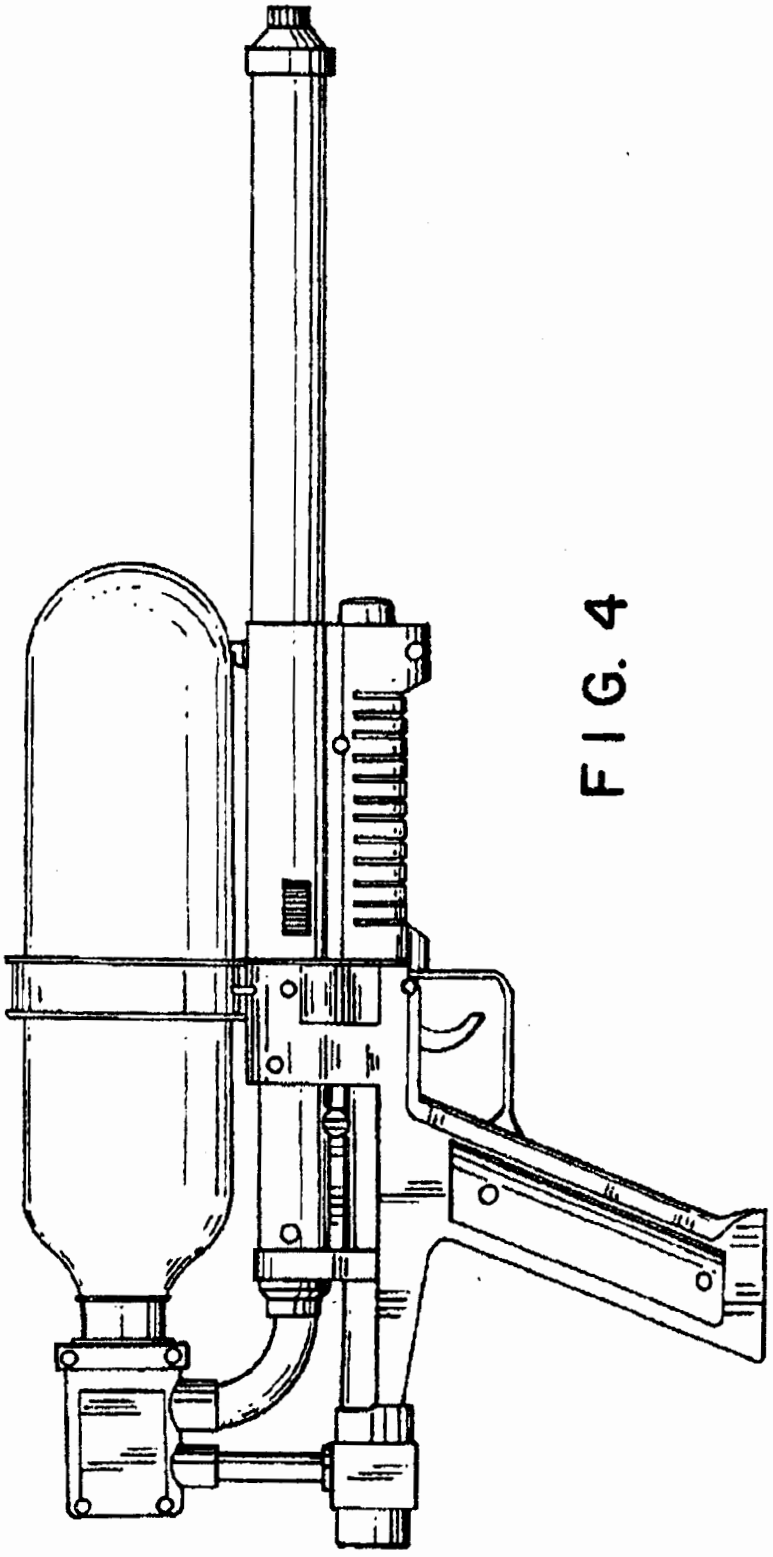


FIG. 4

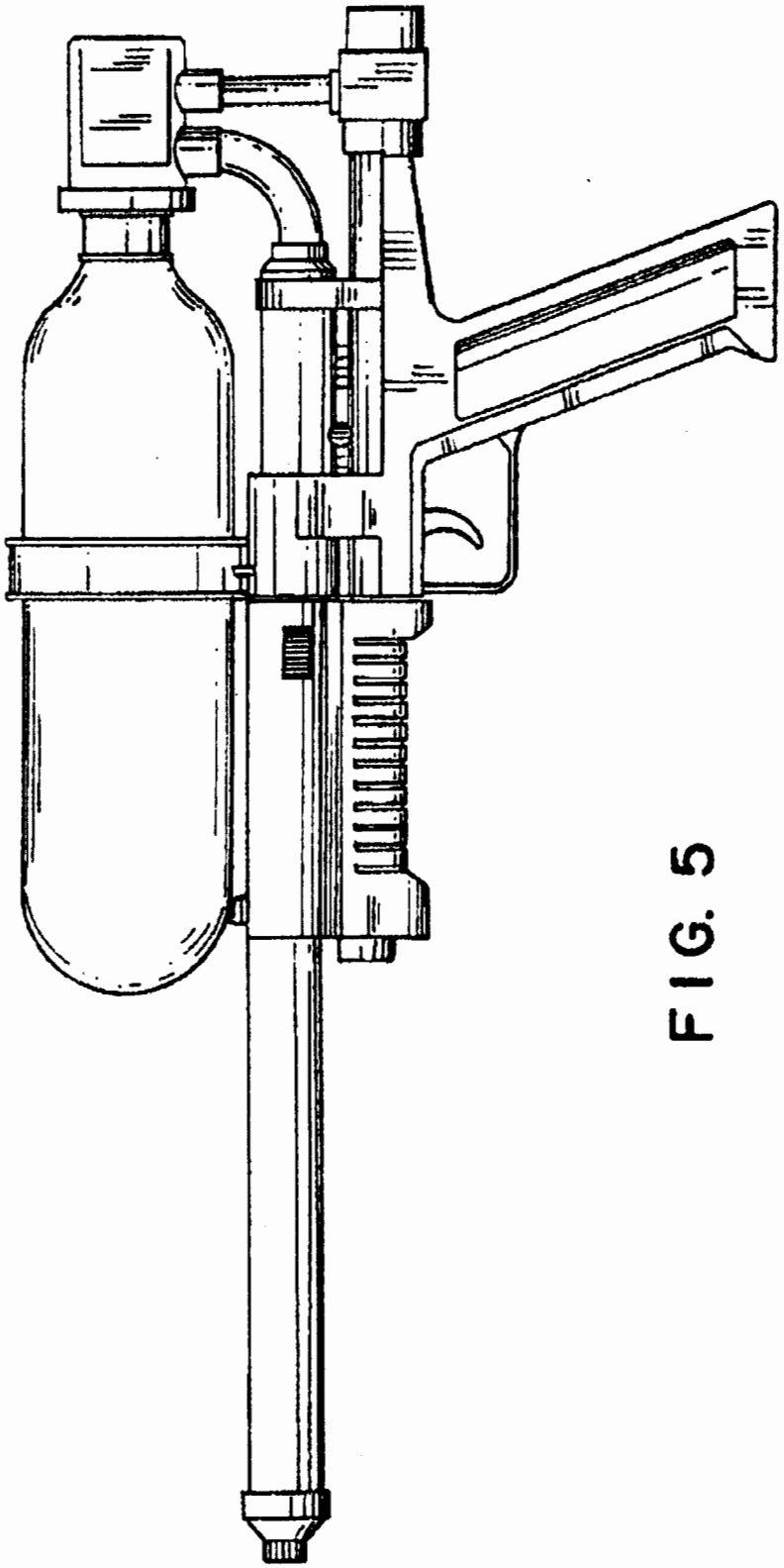


FIG. 5

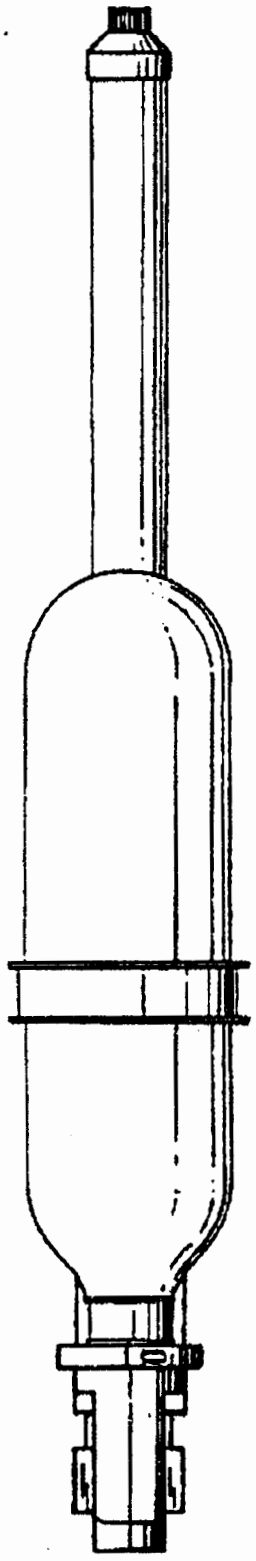


FIG. 6

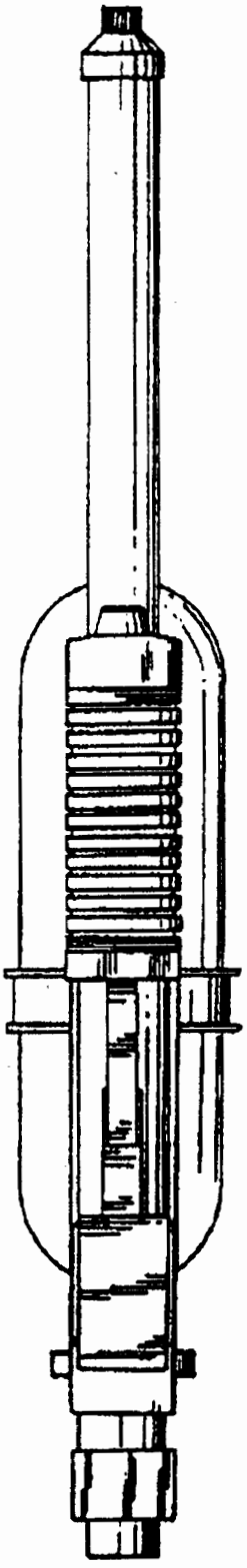
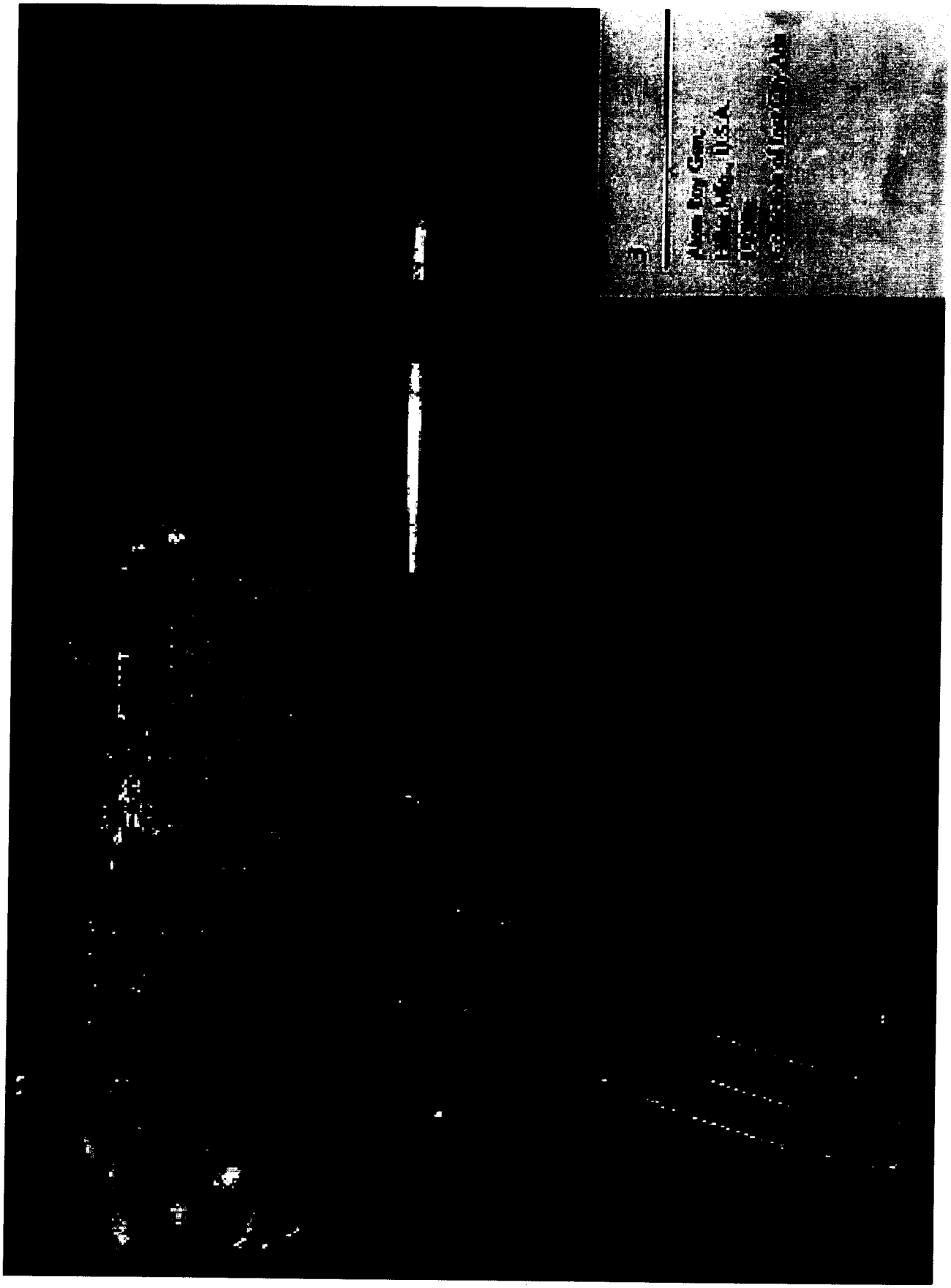
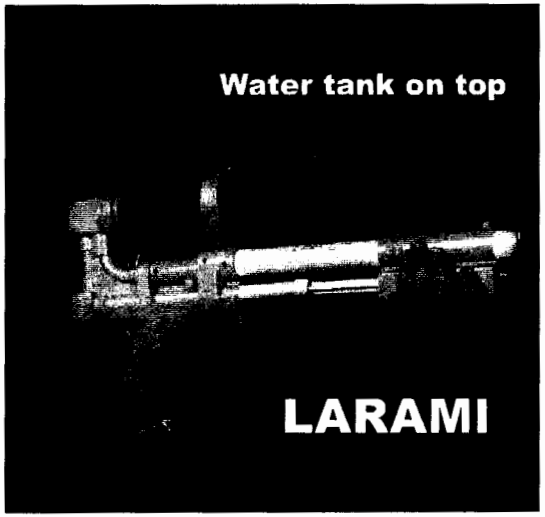
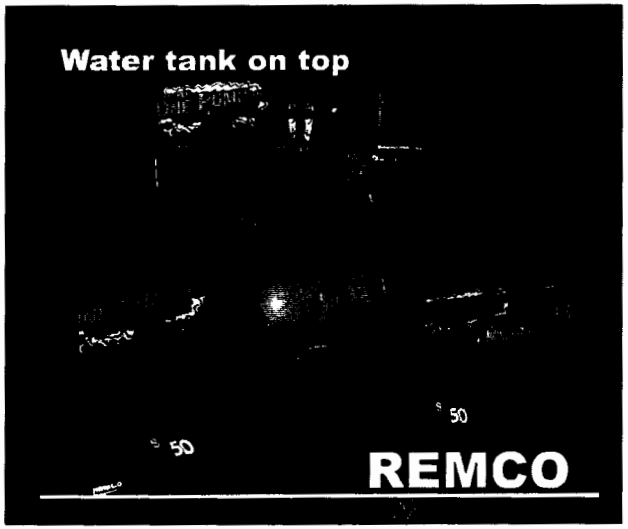
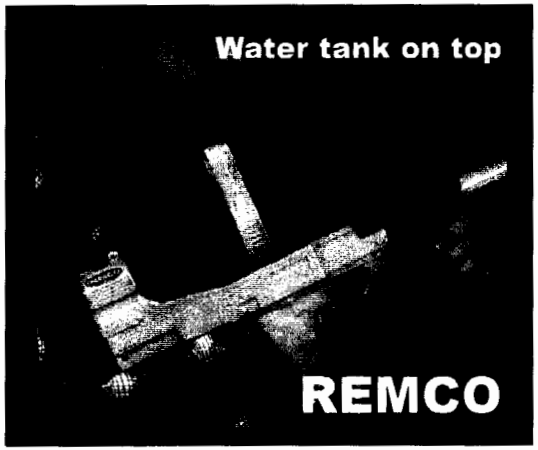


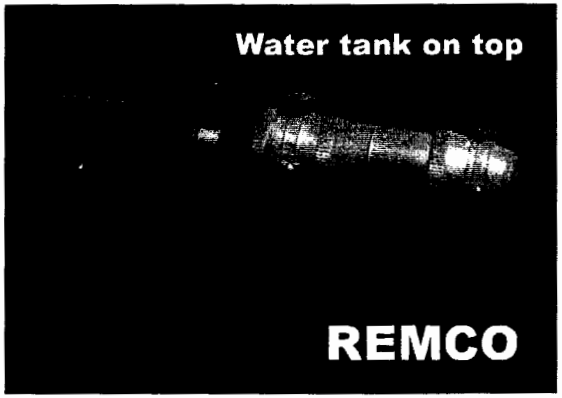
FIG. 7











This Exhibit above shows that
Larami was successful in preventing every toy manufacturer from making air pressurized water guns designed with the water tank placed on top of the gun
except for REMCO.

PANITCH SCHWARZE JACOBS & NADEL
PATENT AND TRADEMARK ATTORNEYS
1801 MARKET STREET
36TH FLOOR
PHILADELPHIA, PA 19103-2399

TELEPHONE: (215) 567-2010
FACSIMILE: (215) 567-2991
TELEX: 831-494
CABLE: PATENTS

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LESLIE L. KASTEN, JR.
JAY S. MEADWAY
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MICHAEL R. NAGY
WALLACE D. NEWCOMB
ANN M. ODORSKI
ROSS J. OEHLER
RONALD L. PANITCH
WILLIAM W. SCHWARZE

PATENT AGENTS
KIRK BAUMEISTER
MARTIN G. BELISARIO
MICHELE L. SIMONS

September 6, 1991

cc: Ned
MATTEL

To Ned Mannon
Bill Amron
What is the all about?

RECEIVED
SEP 10 1991
JOHN

Mr. John Amerman
Chairman of the Board
Mattel Toys
333 Continental Avenue
El Segundo, CA 90245

RE: Protection for "SUPER SOAKER"
Our File: 6468-16

Dear Mr. Amerman:

This firm represents Larami Corp. in patent and trademark matters, including the protection of the intellectual property rights in the "SUPER SOAKER" water gun.

Larami has recently learned that Alan Amron or Talk to Me Programs may have offered to license the design of an air pump water gun to Mattel Toys. Please be advised that the same design for a water gun other than the "SUPER SOAKER" gun is the subject of an exclusive license from Amron and Talk to Me Programs to Larami. If there is a breach of the exclusivity of this license, Larami will seek legal redress against any parties who have intentionally interfered with Larami's exclusive contractual rights.

In addition, please note that patent protection is pending for the "SUPER SOAKER" water gun. Larami intends to promptly commence suit and seek the maximum remedies available against any infringer of any patent that issues on the presently pending applications and other intellectual property rights in the "SUPER SOAKER" water gun.

Sincerely yours,

PANITCH SCHWARZE JACOBS & NADEL

Ronald L. Panitch

RONALD L. PANITCH

RLP/JKM/paf

PANITCH SCHWARZE JACOBS & NADEL
PATENT AND TRADEMARK ATTORNEYS
1601 MARKET STREET
36TH FLOOR
PHILADELPHIA, PA 19103-2398

TELEPHONE: (215) 567-2020
FACSIMILE: (215) 567-2991
TELEX: 831-495
CABLE: PATENTS

PATENT AGENTS
KIRK BAUMEISTER
MARTIN G. BELISARIO
MICHELE L. SIMONS

[illegible]

August 28, 1991

VIA DHL

Illegal Attempt By Larami To Restrain Amron From Licensing His patents & patents pending

Restraint of trade

Azrak-Hamway International
[illegible] Broadway
New York, NY 10010

REMCO

Attention: Ezra Hamway and Marvin Azrak

RE: Protection for "SUPER SOAKER"
Our File: 6468-16

Dear Sirs:

This firm represents Larami Corp. in patent and trademark matters, including the protection of the intellectual property rights in the "SUPER SOAKER" water gun.

Larami has recently learned that Alan Amron or Talk to Me Programs may have licensed the design of an air pump water gun to Remco Toys. Based on the information available on this license, please be advised that the same design is the subject of an exclusive license from Amron and Talk to Me Programs to Larami. If there is a breach of the exclusivity of this license, Larami will seek legal redress against any parties who have intentionally interfered with Larami's exclusive contractual rights.

In addition, please note that patent protection is pending for the "SUPER SOAKER" water gun. Larami intends to promptly commence suit and seek the maximum remedies available against any infringer of any patent that issues on the presently pending applications and other intellectual property rights in the "SUPER SOAKER" water gun.

Sincerely yours,

PANITCH SCHWARZE JACOBS & NADEL

Ronald L. Panitch

RONALD L. PANITCH

RLP/JKM/paf

TOTAL P.02